A319/A320/A321
TECHNICAL TRAINING MANUAL
SA Family to A319/A320/A321 CFM LEAP - T1+T2
00-INTRODUCTION

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00 FAMILY TIES PRESENTATION

THE AIRBUS PRODIGY

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THE AIRBUS PRODIGY

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00 FAMILY TIES PRESENTATION

A320NEO

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A320NEO

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SA FAMILY PRESENTATION

AIRCRAFT GENERAL

The Single Aisle is the most advanced family aircraft in service today, with fly-by-wire flight controls.
The A318, A319, A320 and A321 are twin-engine subsonic medium range aircraft.
The family offers a choice of engines:
- International Aero Engines and CFM International for the A319, A320 and A321.
- CFM International for the A318.

The NEO SA family (except the A318) offers a choice of engines:
- Pratt & Whitney PW 1100G,
- CFM LEAP-1A.

SHARKLET PURPOSE

The sharklets are specially designed for a better eco-efficiency and payload-range performance of the A320 family:
- Less fuel burn,
- Less CO2,
- Revenue payload increased,
- Higher range with the original payload,
- Higher available takeoff weight,
- Lower average takeoff thrust (with large savings in engine maintenance costs),
- Lower takeoff noise,
- Better climb performance,
- Higher initial cruise altitude.

AIRCRAFT DIMENSIONS

The picture shows the main dimensions for the A320.
The A318, A319 and A321 have exactly the same dimensions except that:
- the A318 is 6.12 m (20 ft) shorter,
- the A319 is 3.74 m (12ft 3in) shorter,
- the A321 is 6.93 m (22ft 9in) longer.

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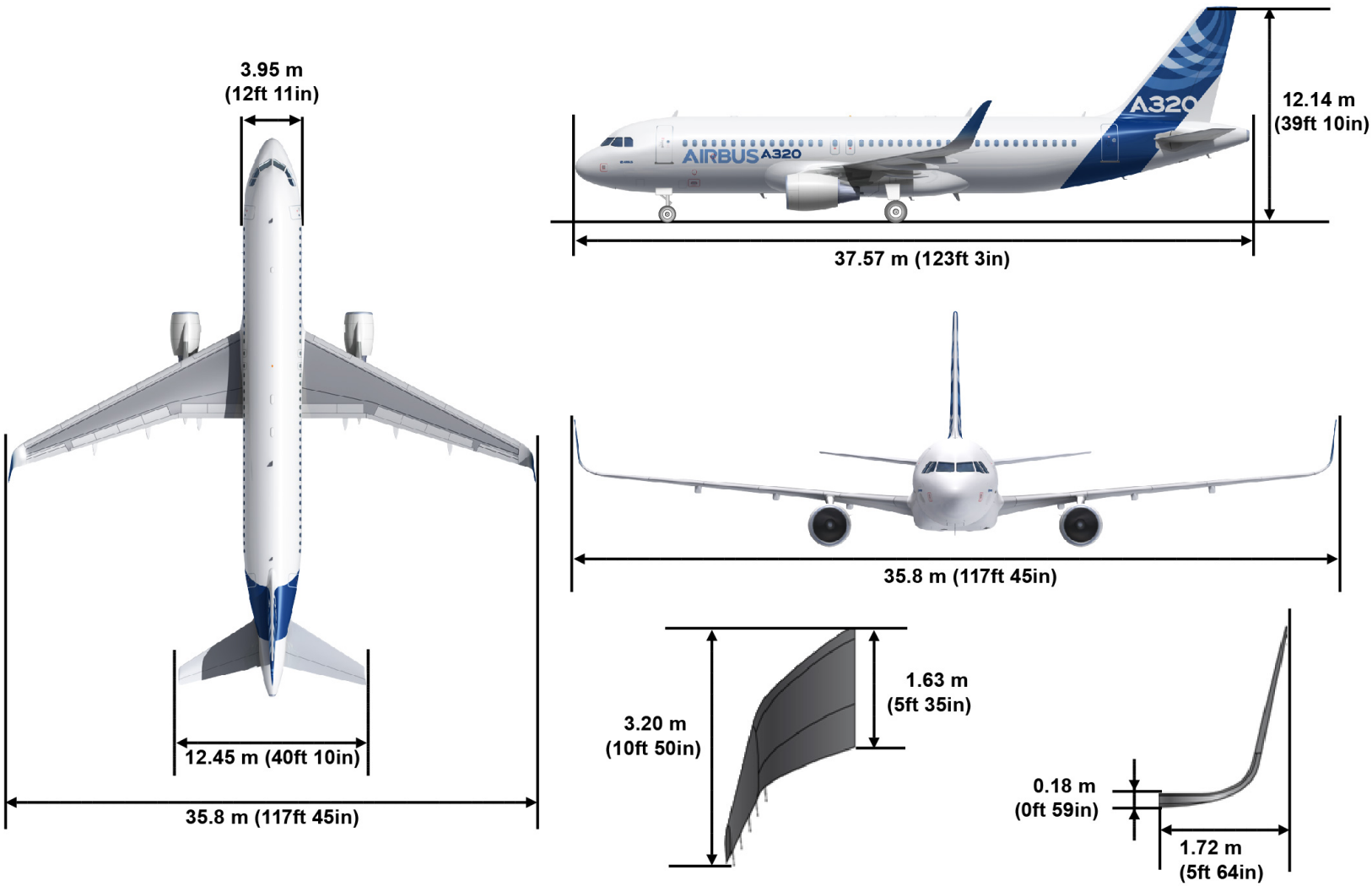

AIRCRAFT GENERAL - SHARKLET PURPOSE & AIRCRAFT DIMENSIONS

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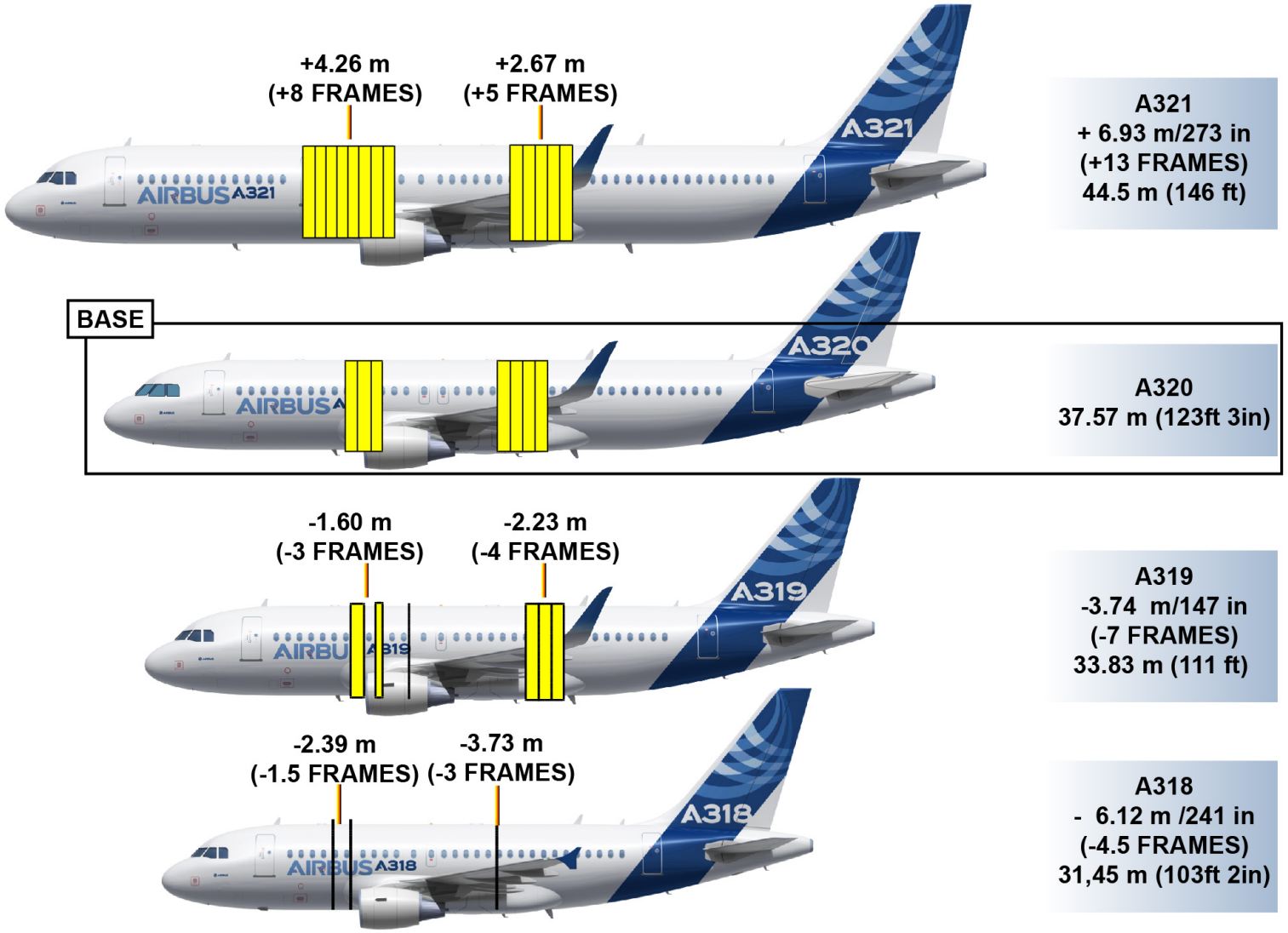

AIRCRAFT GENERAL - SHARKLET PURPOSE & AIRCRAFT DIMENSIONS

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SA FAMILY PRESENTATION

AIRCRAFT GENERAL (continued)

FAMILY RANGE

With A320 family has a range from 3000 to 4000 Nm.

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A320 Family range in Nm:

AIRCRAFT	CEO Winglets	CEO Sharklets	NEO
A318	3100	N/A	N/A
A319	3600	3700	4200
A320	3200	3300	3700
A321	3000	3100	3700

AIRCRAFT GENERAL - FAMILY RANGE

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SA FAMILY PRESENTATION

AIRCRAFT GENERAL (continued)

MAXIMUM WEIGHTS AND OPERATING LIMITS

The following picture shows maximum weights and operating limits for the Single Aisle family aircraft.

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MODEL	ENGINE		MAXIMUM WEIGHTS (kg)			OPERATING LIMITS	
	MANUFACTURER	TYPE	Max Take-Off Weight (MTOW)	Max Landing Weight (MLW)	Max Zero Fuel Weight (MZFW)	Match Max Operating Speed (MMO)	Maximum Operating Speed (VMO)
A318-100	CFMI	CFM56-5B	FROM 59000 TO 68000	FROM 56000 TO 575000	FROM 53000 TO 54500	0.82	350 kt
A319-100	CFMI	CFM 56-5A CFM 56-5B	FROM 64000 TO 75500	FROM 61000 TO 62500	FROM 57000 TO 58500		
	IAE	IAE V2522 IAE V2524 IAE V2527					
A319-NEO	PW	PW1127G-JM	FROM 64000 TO 75500	FROM 62800 TO 63900	FROM 58800 TO 60300		
	CFM	LEAP-1A					
A320-100	CFMI	CFM56-5A	68000	63000	59000		
A320-200	CFMI	CFM 56-5A CFM 56-5B	FROM 73500 TO 78000	FROM 64500 TO 66000	FROM 61000 TO 62500		
	IAE	IAE V2527 IAE V2500					
A320 NEO	PW	PW1127G-JM	FROM 70000 TO 79000	FROM 66300 TO 67400	FROM 62800 TO 64300		
	CFM	LEAP-1A					
A321-100	CFMI	CFM56-5B	FROM 89000 TO 93500	FROM 73500 TO 75000	FROM 69500 TO 71000		
	IAE	IAE V2530					
A321-200	CFMI	CFM56-5B	FROM 89000 TO 93000	FROM 75500 TO 77800	FROM 71500 TO 73800		
	IAE	IAE V2533 IAE V2530					
A321-NEO	PW	PW1127G-JM	FROM 89000 TO 93500	FROM 77300 TO 79200	FROM 73300 TO 75600		
	CFM	LEAP-1A					

AIRCRAFT GENERAL - MAXIMUM WEIGHTS AND OPERATING LIMITS

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SA FAMILY PRESENTATION

AIRCRAFT GENERAL (continued)

THE CABIN

Cabin seat layout shown in the graphic is the Airbus recommended seat quantity and pitch based on the design of the airframe. Normally the Airline, based on needs, modifies these layouts.
The cabin has a maximum of:
- 129 seats for the A318,
- 145 seats for the A319,
- 180 seats for the A320,
- 220 seats for the A321,
- A320 SA NEO family consists of A319/A320/A321 aircrafts.

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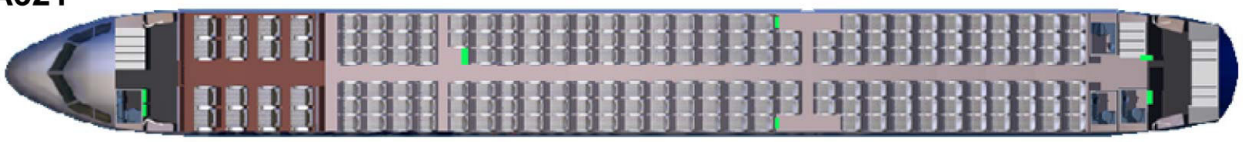
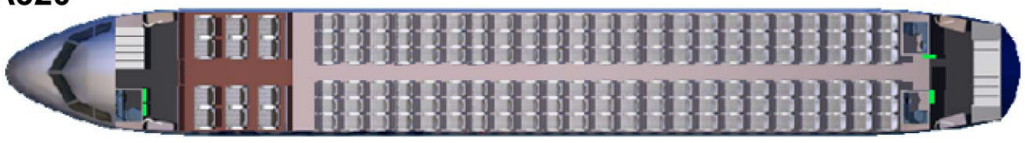
A321



16 FIRST CLASS + 169 ECONOMY = 185 SEATS

SEAT PITCHES: FIRST 0.91 m (36 in)
ECONOMY 0.81/0.79 m (32/31 in)

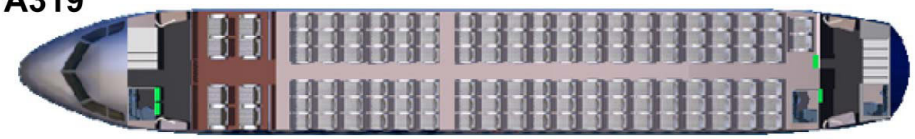
A320



12 FIRST CLASS + 138 ECONOMY = 150 SEATS

SEAT PITCHES: FIRST 0.91 m (36 in)
ECONOMY 0.81 m (32 in)

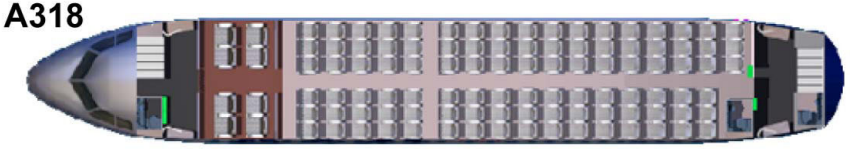
A319



8 FIRST CLASS + 116 ECONOMY = 124 SEATS

SEAT PITCHES: FIRST 0.91 m (36 in)
ECONOMY 0.81 m (32 in)

A318



8 FIRST CLASS + 99 ECONOMY = 107 SEATS

SEAT PITCHES: FIRST 0.91 m (36 in)
ECONOMY 0.81m (32 in)

AIRCRAFT GENERAL - THE CABIN

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SA FAMILY PRESENTATION

AIRCRAFT GENERAL (continued)

DOOR HEIGHTS

The following picture shows the different door heights.

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	METERS	FEET	
A	12.14	39ft 10in	MAXIMUM HEIGHT FOR A320
	12.93	42ft 5in	MAXIMUM HEIGHT FOR A318
B	3.55	11ft 8in	AFT PASSENGER DOOR
C	2.30	7ft 7in	BULK CARGO DOOR (OPTIONAL)
D	2.11	6ft 11in	AFT CARGO DOOR
E	1.80	5ft 11in	MAXIMUM FUSELAGE CLEARANCE
F	2.06	6ft 9in	FORWARD CARGO DOOR
G	3.45	11ft 4in	FORWARD PASSENGER DOOR

AIRCRAFT GENERAL - DOOR HEIGHTS

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SA FAMILY PRESENTATION

AIRCRAFT GENERAL (continued)

COMPOSITE STRUCTURES

The picture shows the composite structures included in Single Aisle family aircraft.

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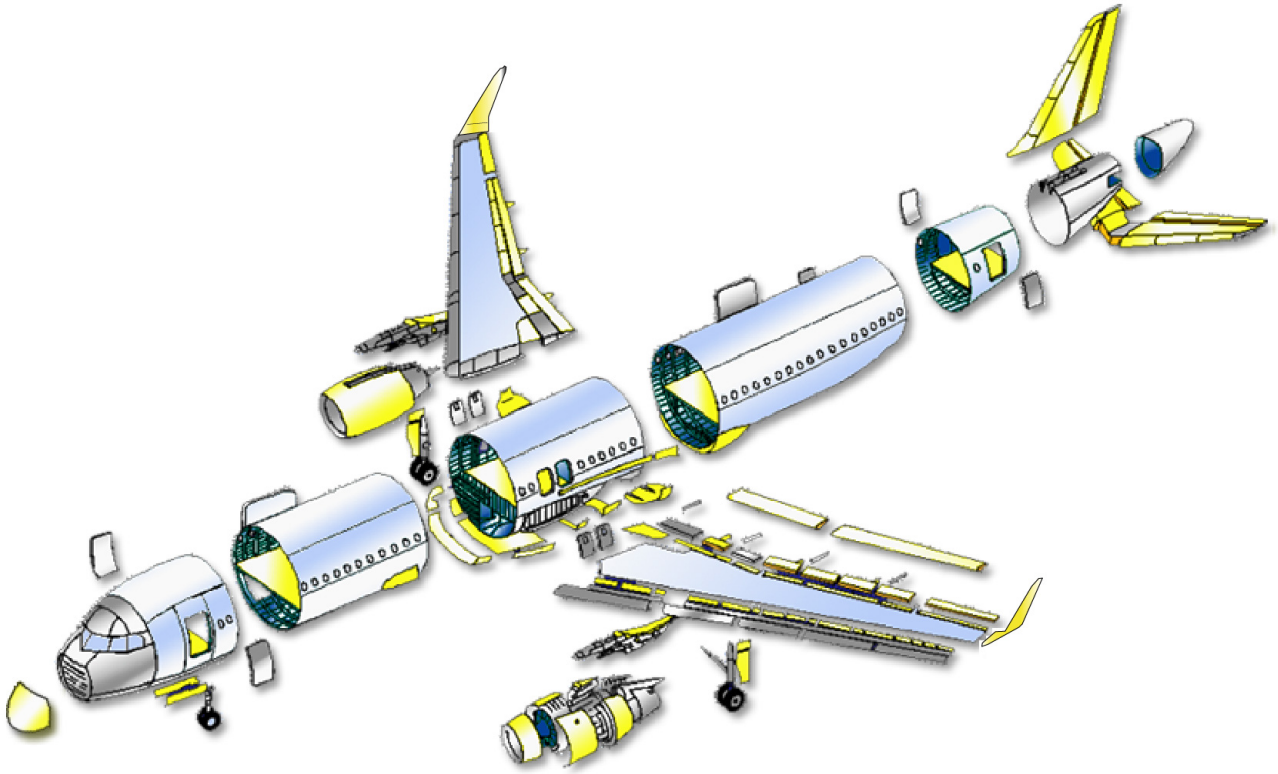

AIRCRAFT GENERAL - COMPOSITE STRUCTURES

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SA FAMILY PRESENTATION

STRUCTURAL BREAKDOWN AND ZONING

In this topic, the fuselage, vertical and horizontal stabilizers, and wings station numbers are shown.

FUSELAGE

The station (STA) number is the distance in millimeters of the cross-section from a reference point. The reference (X=0) for all structural measurements in the X-axis is located 2.54 m (100 in) forward of the aircraft.

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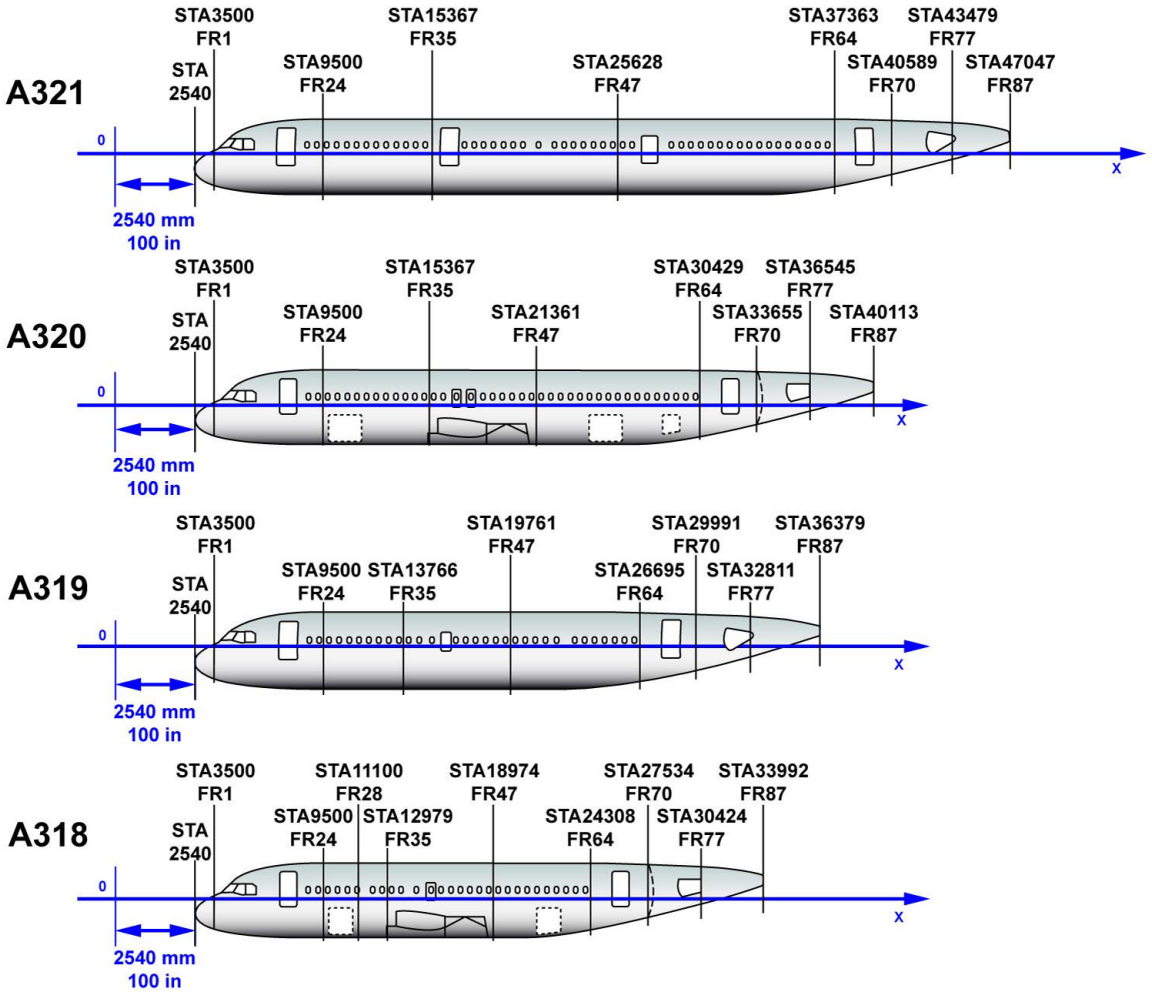

STRUCTURAL BREAKDOWN AND ZONING - FUSELAGE

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SA FAMILY PRESENTATION

STRUCTURAL BREAKDOWN AND ZONING (continued)

VERTICAL STABILIZER

For the vertical stabilizer the reference station is Z=0 at the vertical Z-axis. Due to the fin tip extension, the A318 station numbers have changed. The new rib 12N is on the STA5970.

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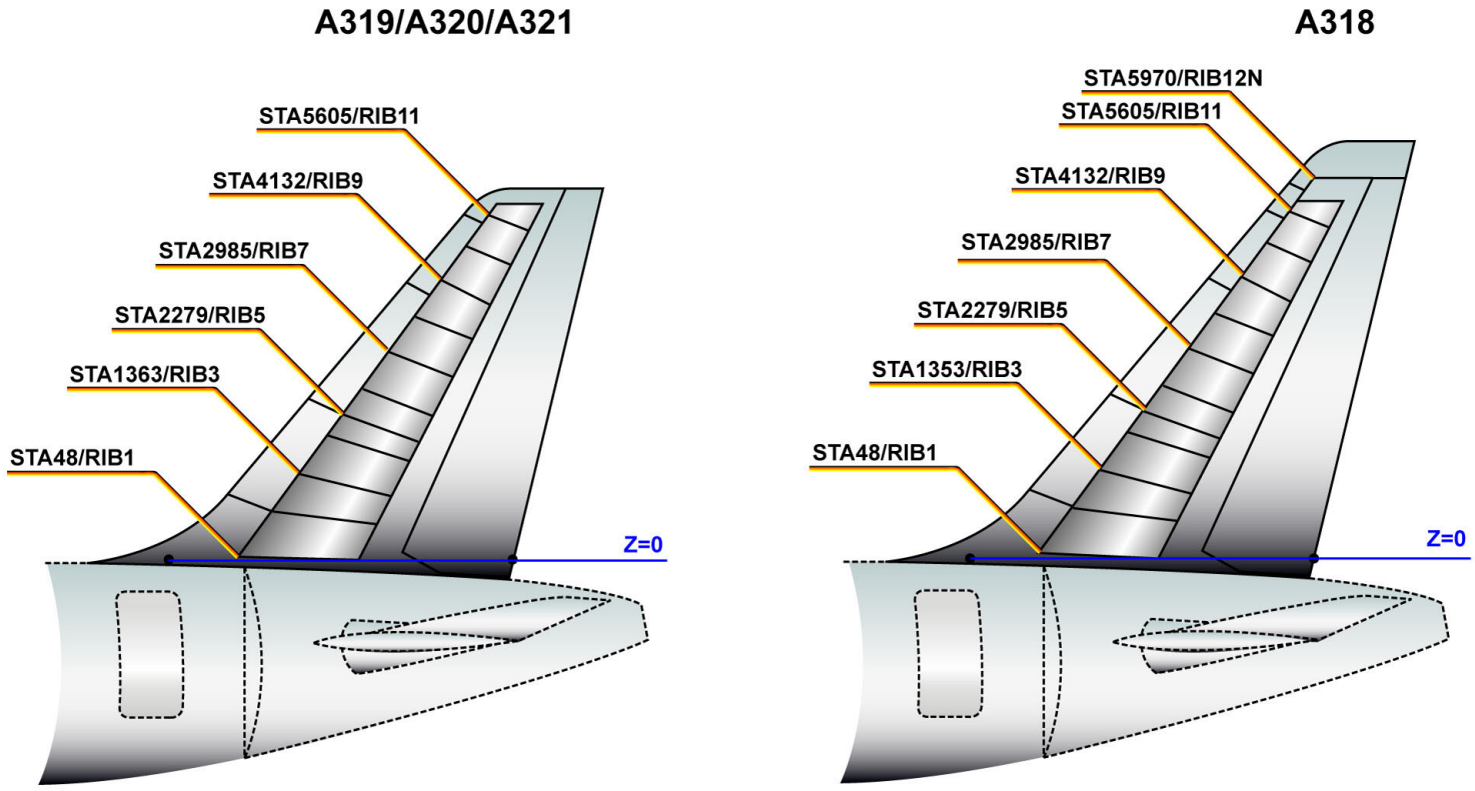

STRUCTURAL BREAKDOWN AND ZONING - VERTICAL STABILIZER

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SA FAMILY PRESENTATION

STRUCTURAL BREAKDOWN AND ZONING (continued)

HORIZONTAL STABILIZER

For the horizontal stabilizer the reference station is Y=0 at the horizontal Y-axis.

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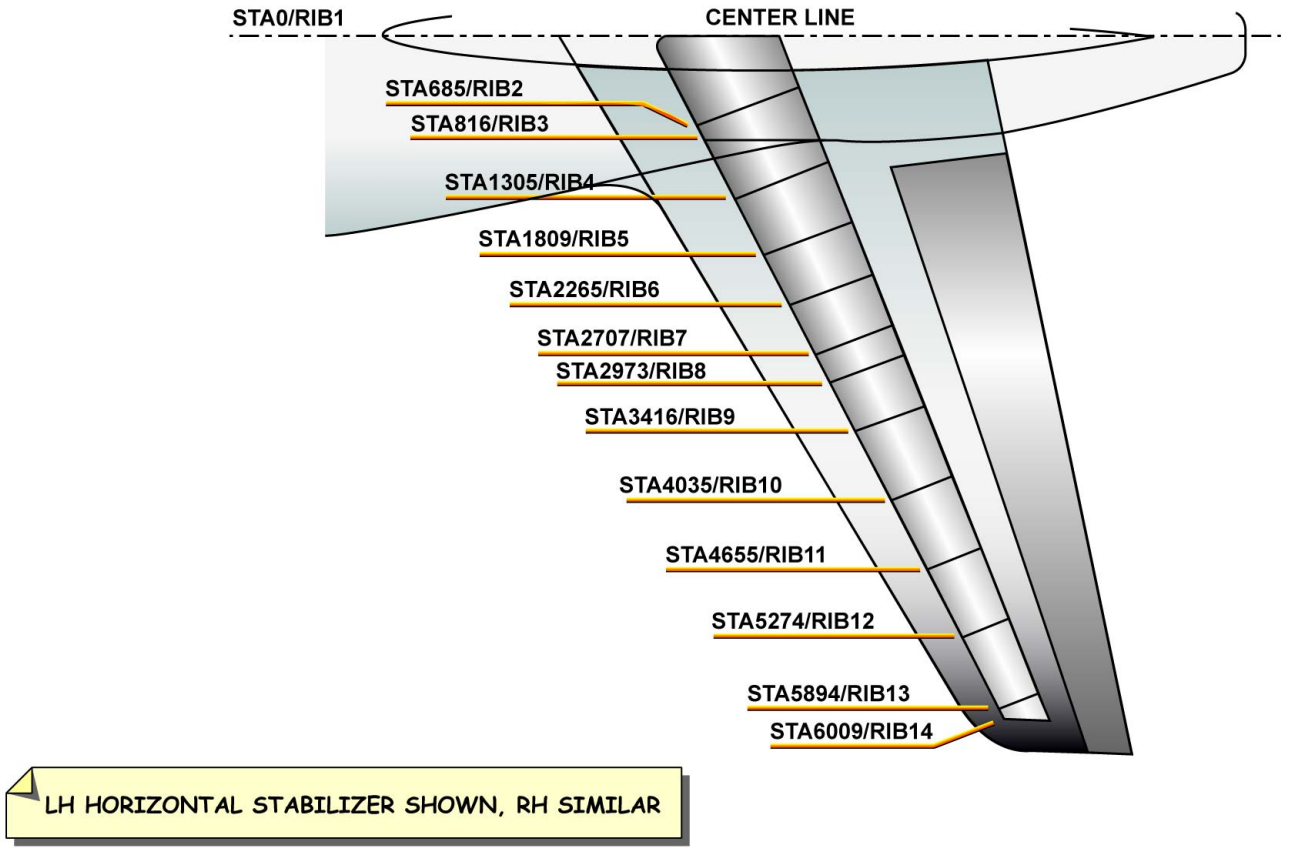

STRUCTURAL BREAKDOWN AND ZONING - HORIZONTAL STABILIZER

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SA FAMILY PRESENTATION

STRUCTURAL BREAKDOWN AND ZONING (continued)

WING

For wings, the reference station is the wing reference axis that is located at 1868 millimeters (73.54 in) from the aircraft X-axis.

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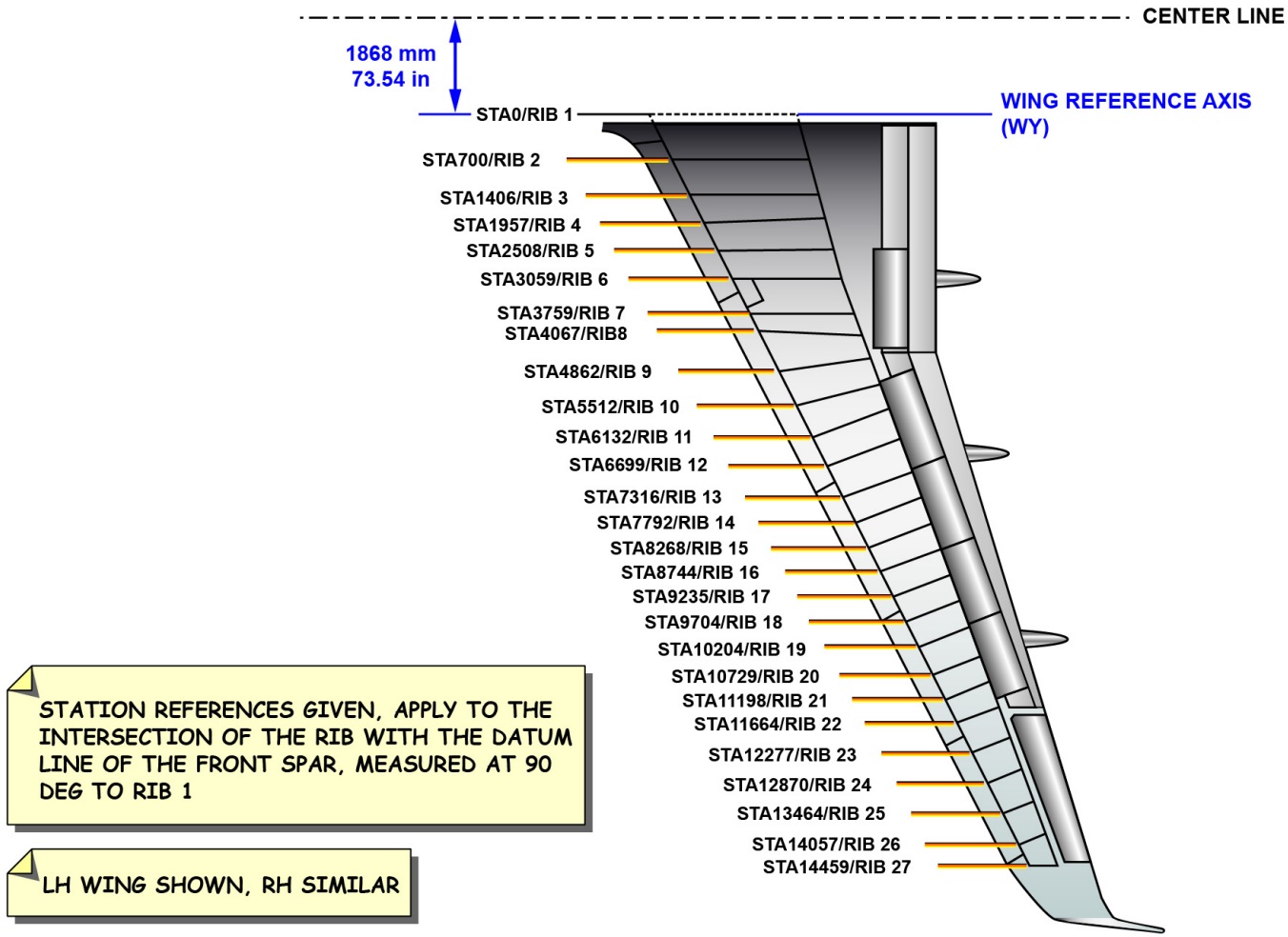

STRUCTURAL BREAKDOWN AND ZONING - WING

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SA FAMILY PRESENTATION

COCKPIT PRESENTATION

The cockpit has adjustable seats for two crew members, a third occupant seat and, depending on the configuration a folding seat for a fourth occupant. Various furnishings and equipment are installed in the cockpit for the comfort, convenience and safety of the occupants.

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COCKPIT PRESENTATION

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SA FAMILY PRESENTATION

COCKPIT PRESENTATION (continued)

OVERHEAD PANEL

The controls of most aircraft systems are located on the overhead panel.
The overhead panel is divided into two main sections:
- a FWD section including the system panels,
- an AFT section including mainly the circuit breaker panel.

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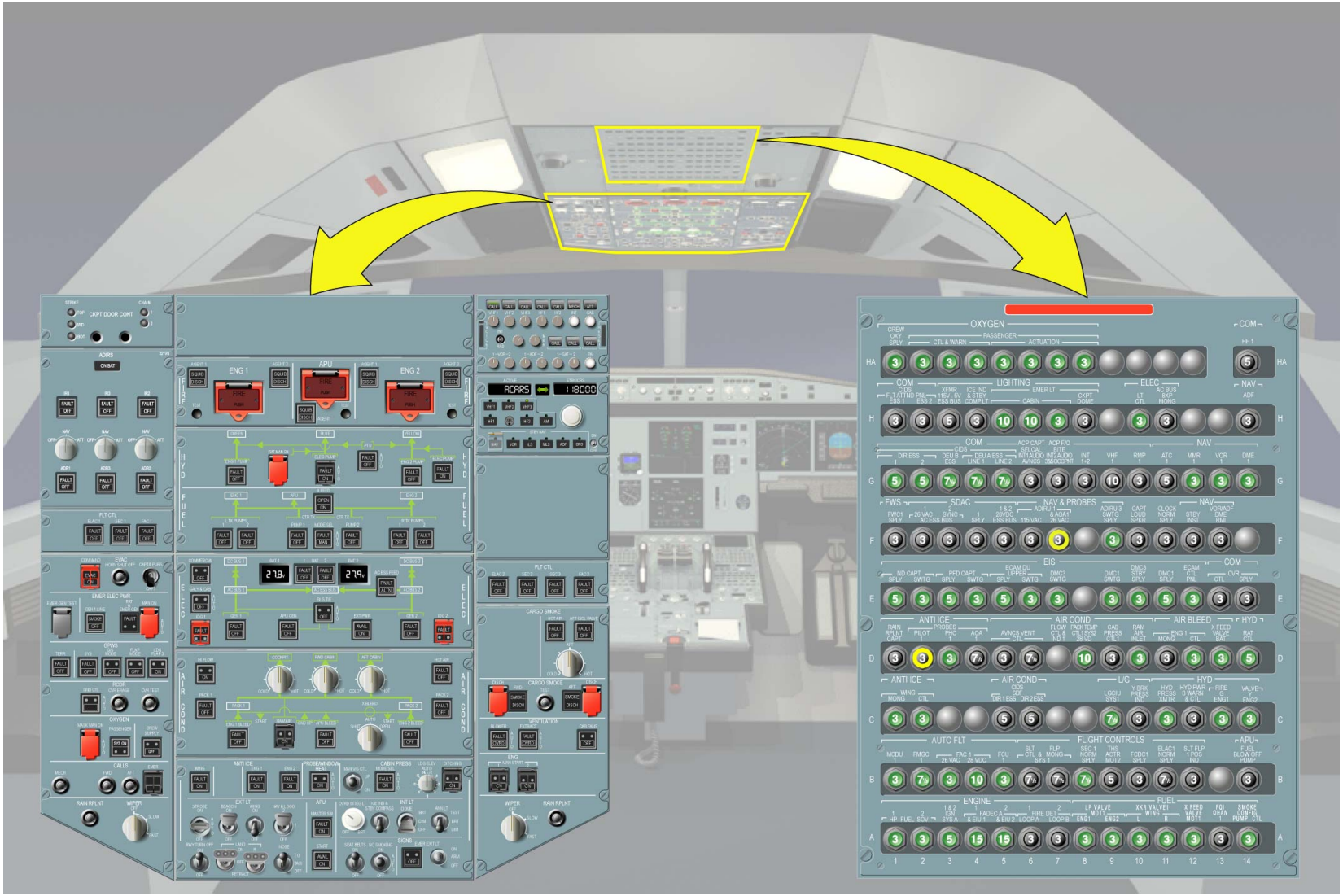

COCKPIT PRESENTATION - OVERHEAD PANEL

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SA FAMILY PRESENTATION

COCKPIT PRESENTATION (continued)

GLARESHIELD

The Flight Control Unit (FCU) includes the EFIS controls, and is used for control and monitoring of the Auto Flight System (AFS). It is located on the glareshield.
The "Master Warning" and the "Master Caution" lights are also located on the glareshield.

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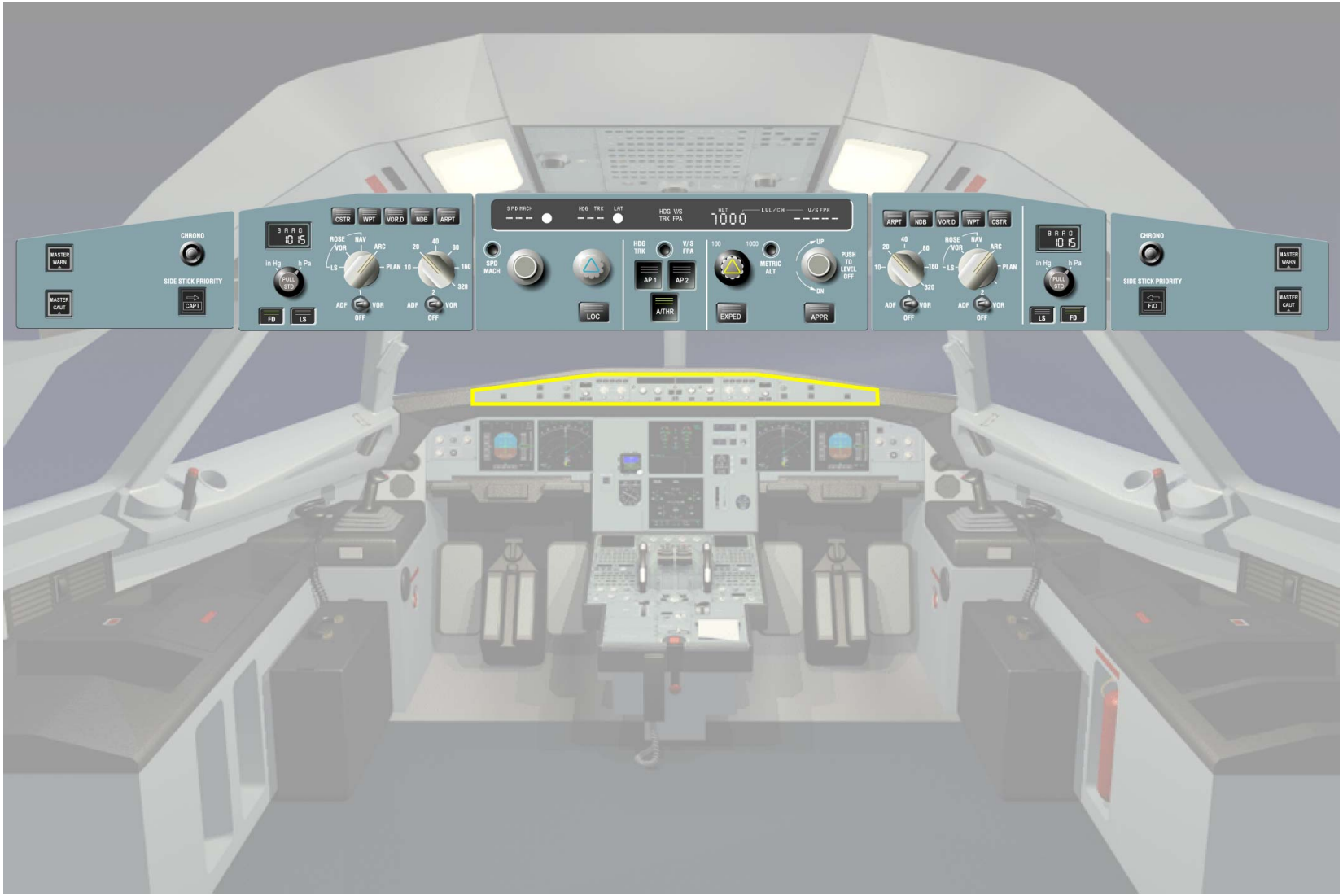

COCKPIT PRESENTATION - GLARESHIELD

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SA FAMILY PRESENTATION

COCKPIT PRESENTATION (continued)

MAIN INSTRUMENT PANEL (ENHANCED)

The enhanced single aisle aircraft main instrument panel instrumentation has been updated. Liquid Crystal Displays (LCDs) replace the existing CRTs. A single integrated electronic indicator, the Integrated Standby Instrument System (ISIS) replaces the standby instrumentation: Standby horizon, Airspeed indicator and Altimeter.

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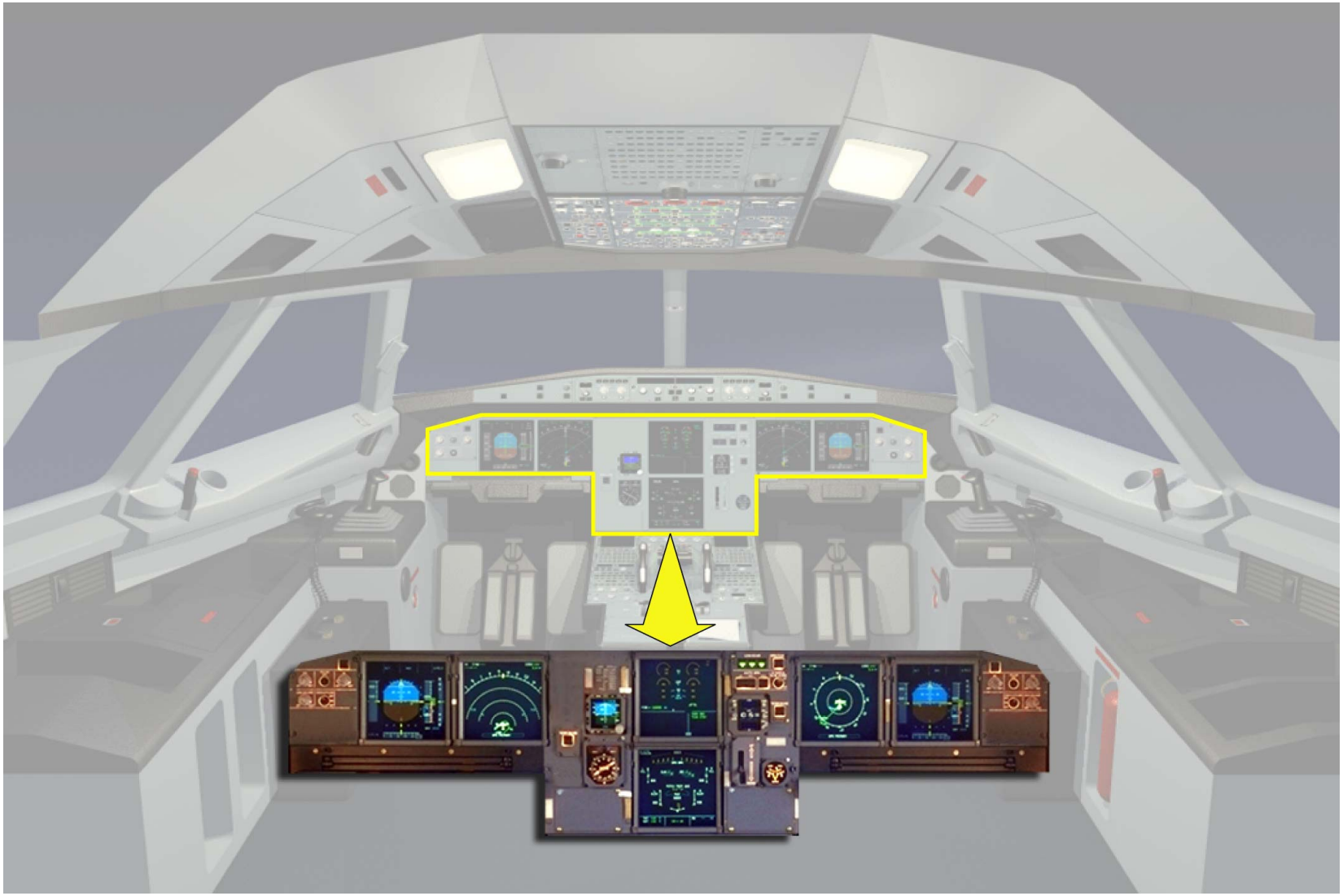

COCKPIT PRESENTATION - MAIN INSTRUMENT PANEL (ENHANCED)

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SA FAMILY PRESENTATION

COCKPIT PRESENTATION (continued)

CENTER PEDESTAL

The center pedestal ergonomic design of the SA family aircraft gives the flight crew efficient access to multiple system controls without compromising safety.
The panels are:
- Switching panel,
- ECAM control panel (ECP),
- Multipurpose Control Display Units (MCDU),
- Radio Management Panels (RMPs),
- Audio Control Panels (ACPs),
- Thrust levers and thrust reverser levers,
- Pitch trim wheel,
- Engine start panel,
- Air Traffic Control / Traffic Collision Avoidance System panel (ATC/TCAS),
- Flap/slat control handle,
- Speed brake control panel,
- Parking brake control panel,
- Cockpit door lock panel,
- Landing gear gravity extension handle,
- Printer,
- Multipurpose Disk Drive Unit (MDDU) (Optional),
- PA handset at the rear of the pedestal.

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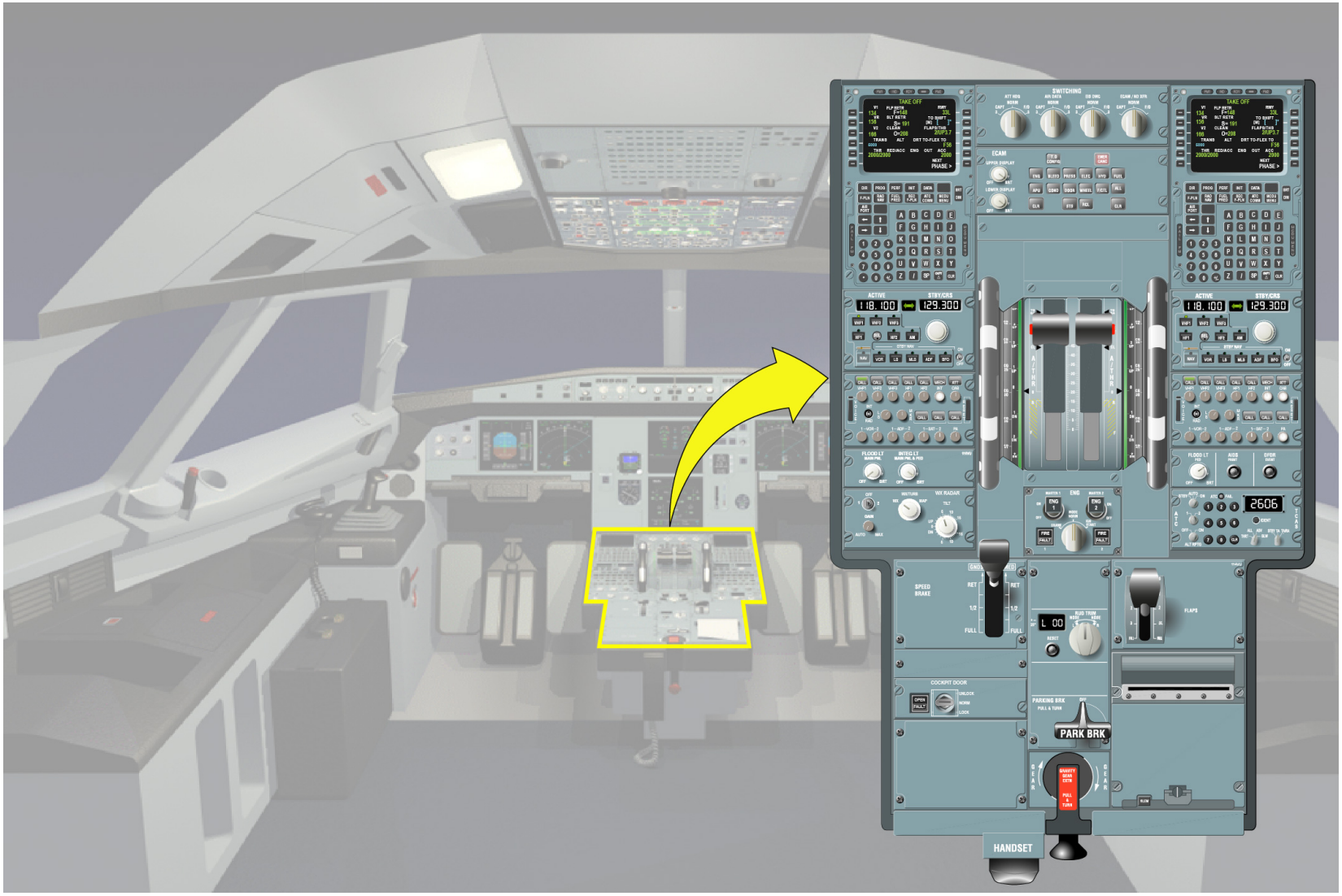

COCKPIT PRESENTATION - CENTER PEDESTAL

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SA FAMILY PRESENTATION

COCKPIT PRESENTATION (continued)

SIDE CONSOLES

The Conventional Aircraft control yoke is noticeably missing in the Airbus Single Aisle aircraft. The Side Stick Controller (SSC) replaces the Conventional Aircraft yoke. There is one SSC for each pilot mounted in the side consoles.
The Aircraft nose wheel is steerable. The flight crew operates the Nose Wheel Steering (NWS) by using the NWS tillers mounted outboard of the SSC on the same side console.
Behind the most forward side console are installed several other compartments along the outboard sides of the cockpit. These side consoles are used as stowage space for documents, oxygen masks, fire extinguisher and microphone and headset connections

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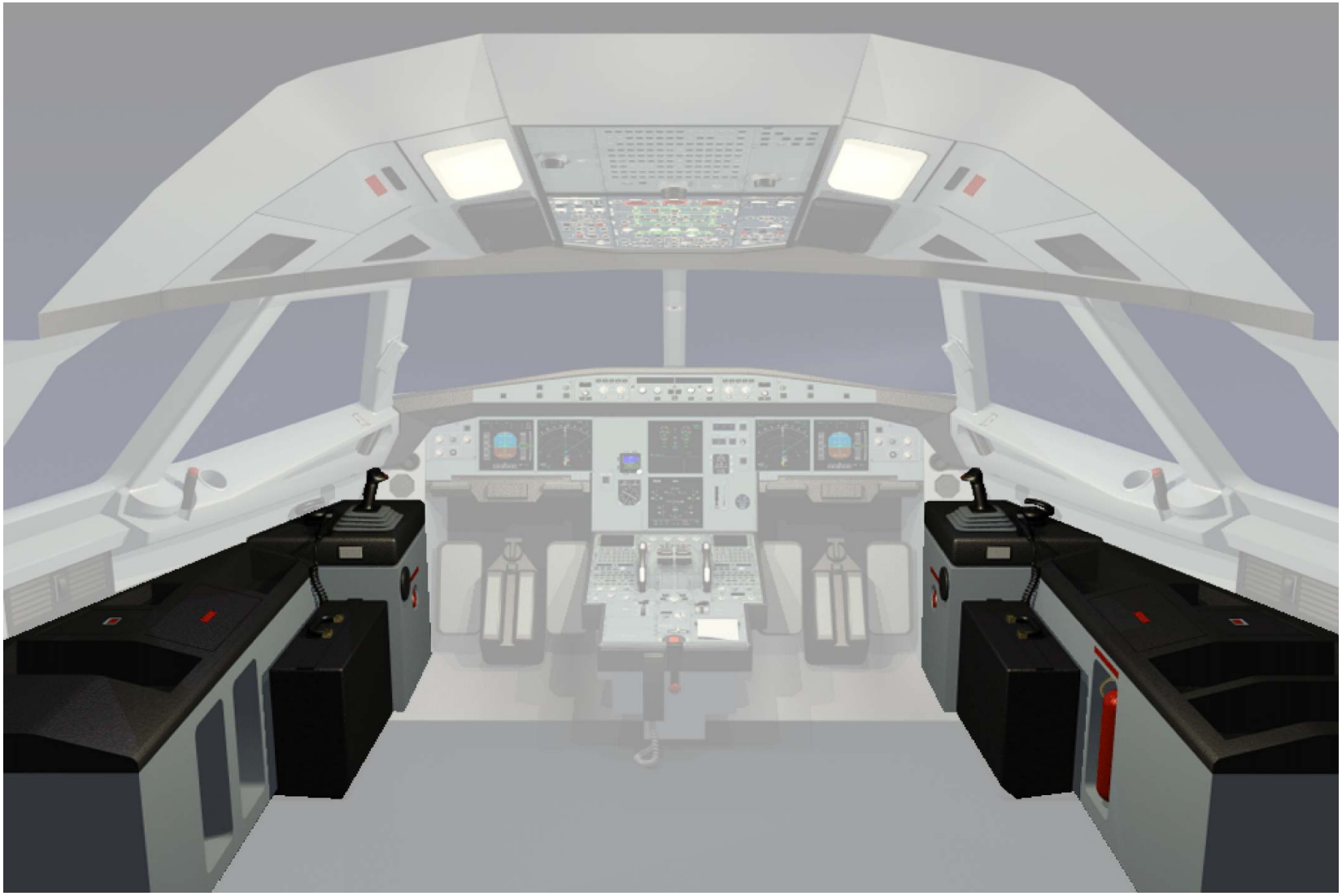

COCKPIT PRESENTATION - SIDE CONSOLES

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SA FAMILY PRESENTATION

COCKPIT PHILOSOPHY

Prior to the design of the A320 family aircraft, the designers examined previous generation aircraft cockpit system indications. A decision was made on the system indicator lights on the overhead panel that indicator lights do not come on when systems are in normal operation and there are no failures.
This ergonomic design enabled the pilots to immediately see when a system is faulty or has been manually shut off.
Most of the pushbuttons with light have two stable positions: pressed in and released out, each position is related to a control signal sent to a system.
Pressed in (recessed):
- normally used system activation (AUTO or ON),
- temporarily used system activation (ON),
- system activated for maintenance operation (ON) or override (OVRD).

Released out (flush with the panel):
- deactivation of a system (OFF),
- manual activation of a system (ON),
- activation of an alternate system (ALTN).

Some pushbuttons have only one stable position:
- released out.

When pushed, they send a control signal to the system.

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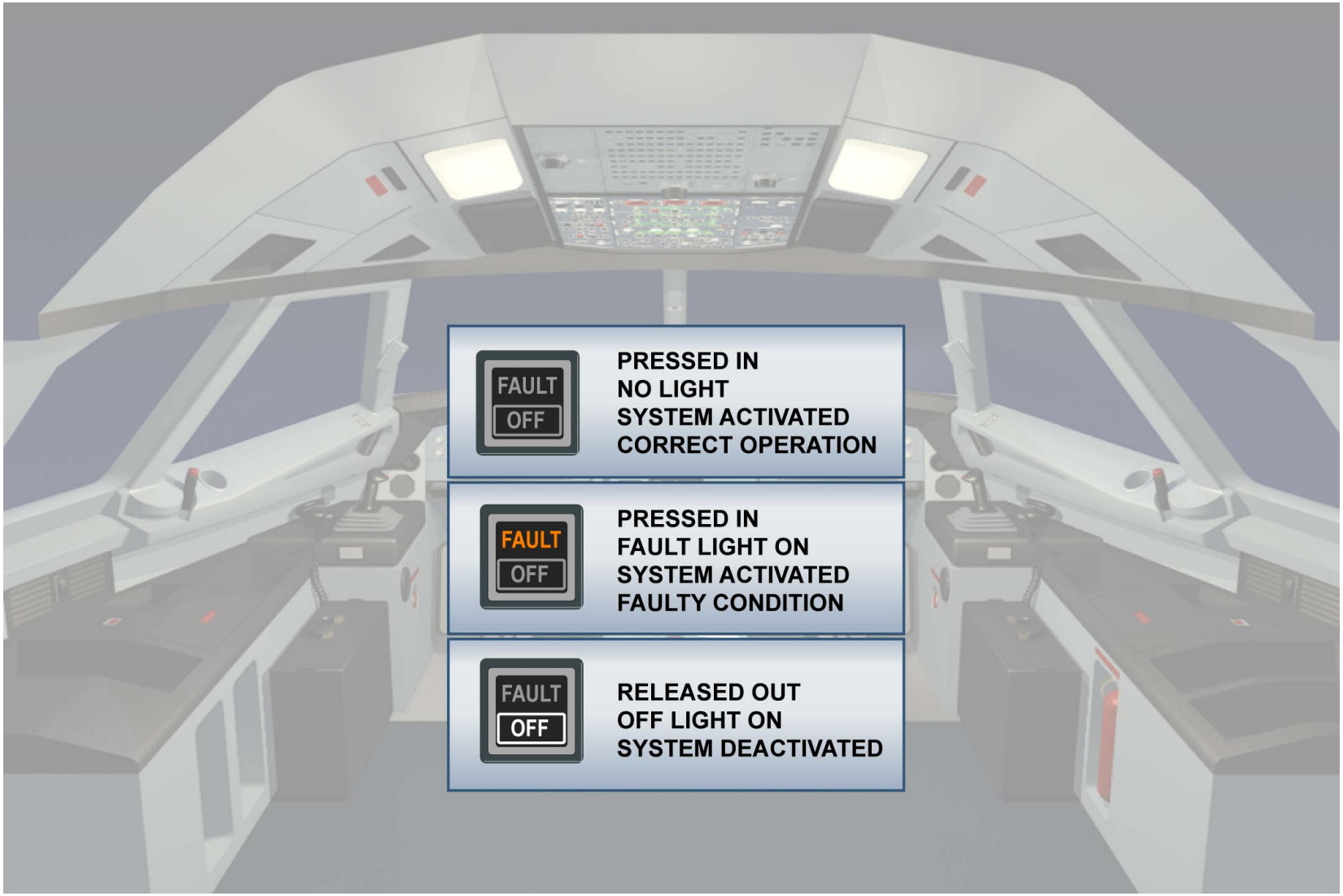

COCKPIT PHILOSOPHY

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SA FAMILY PRESENTATION

COCKPIT PHILOSOPHY (continued)

PUSHBUTTON COLOR PHILOSOPHY

The pushbuttons light and annunciator lights are in different colors according to their function.
In normal operation, only green lights and, sometimes, blue lights come on.

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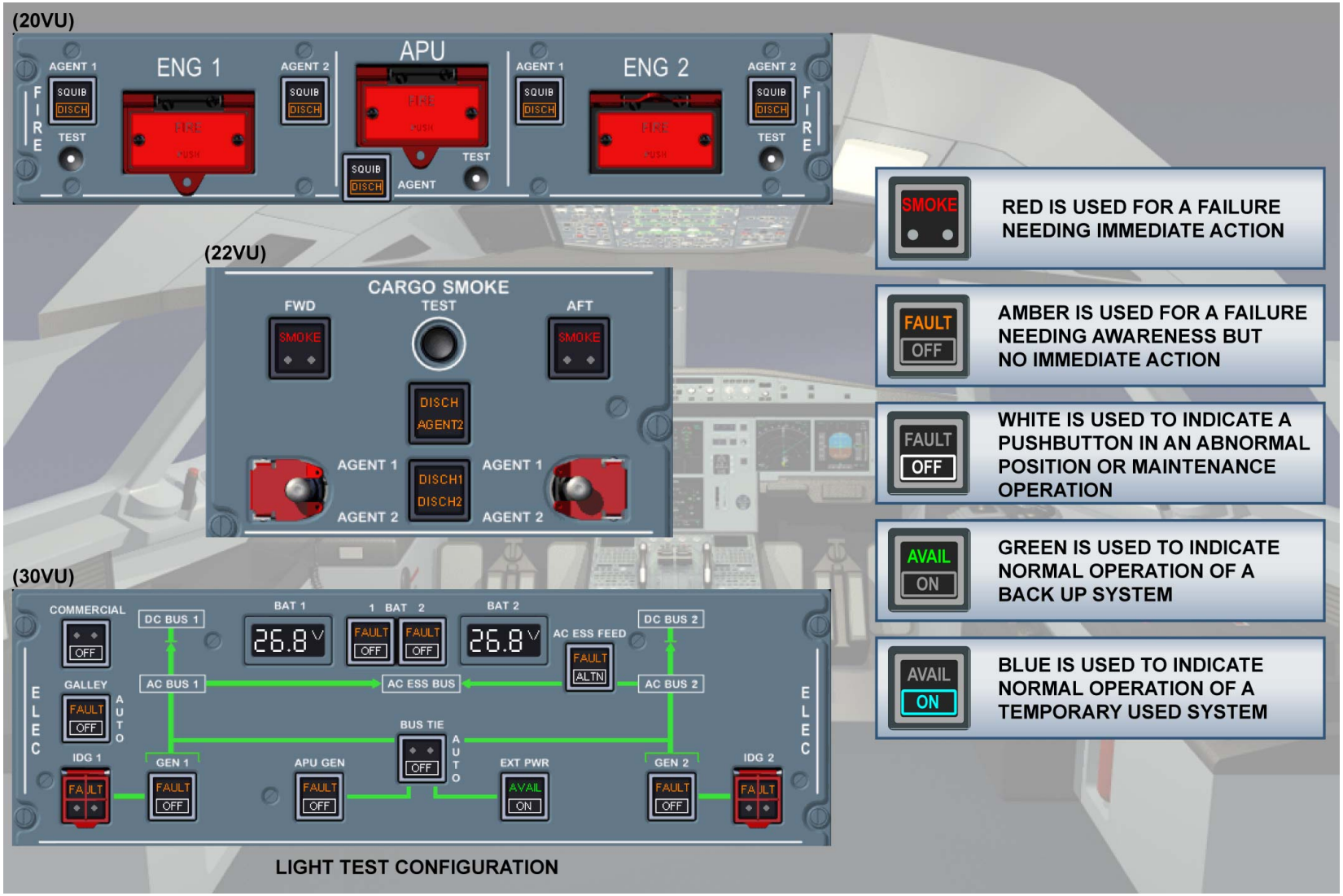

COCKPIT PHILOSOPHY - PUSHBUTTON COLOR PHILOSOPHY

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SA FAMILY PRESENTATION

GROUND SUPPORT EQUIPMENT AND TOOLS

The World Airlines Technical Operations Glossary (WATOG) definition of Ground Support Equipment (GSE) is:
equipment required on the ground to support the operation and maintenance of the aircraft and all its airborne equipment.
Airbus divides GSE into two categories:
- tools,
- standard GSE.

Tools can be split into two categories:
- standard tools,
- specific tools.

STANDARD TOOLS

Standard tools are hand tools such as spanners, sockets, gauges, torque wrenches...
The specifications (size, range, capacity, accuracy...) are given in the related Aircraft Maintenance Manual (AMM) task to let operators use the tool brand of their choice.
Standard tools for Aircraft Maintenance are all in US units.
Metric tools maybe required for shop maintenance.
They are not required for aircraft maintenance but will be required to maintain Airbus specific tools and, in some cases, for aircraft component maintenance in the shop.

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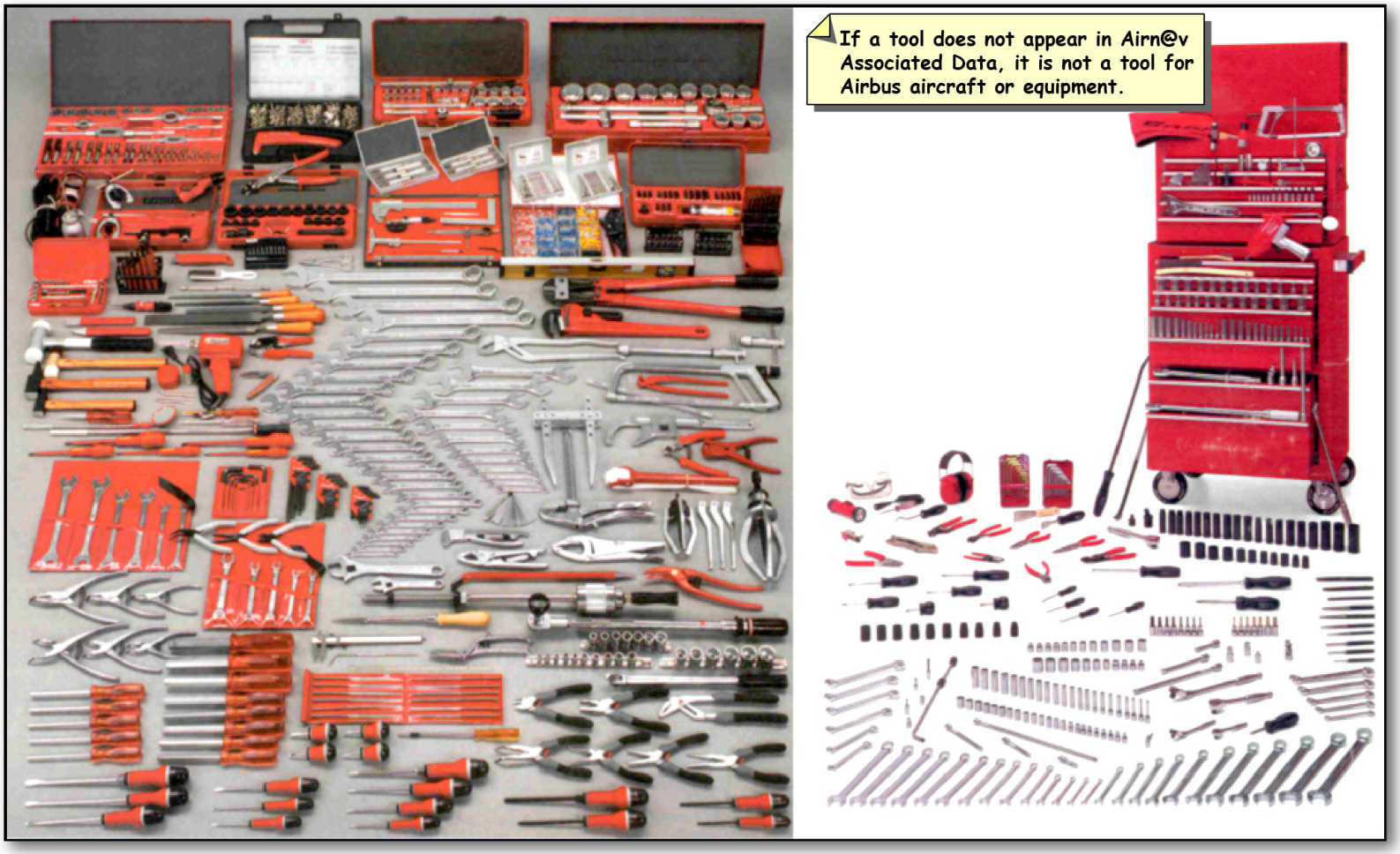

GROUND SUPPORT EQUIPMENT AND TOOLS - STANDARD TOOLS

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SA FAMILY PRESENTATION

GROUND SUPPORT EQUIPMENT AND TOOLS (continued)

SPECIFIC TOOLS

Specific tools are tools designed by Airbus or by its vendors to carry out given maintenance tasks on the aircraft or one of its components.
All maintenance tools for "on - aircraft" maintenance such as the AMM, Trouble Shooting Manual (TSM)... and for "off - aircraft" maintenance such as the Component Maintenance Manual (CMM) are found in the Support Equipment Summary (SES) document.
The SES covers all Airbus aircraft types and all associated documentation.
If a tool does not appear in the Airn@v Associated Data it is not a tool for Airbus aircraft or equipment.
All specific tools called up for "on - aircraft" maintenance in the AMM and the TSM are illustrated in the Tool Equipment Manual (TEM).

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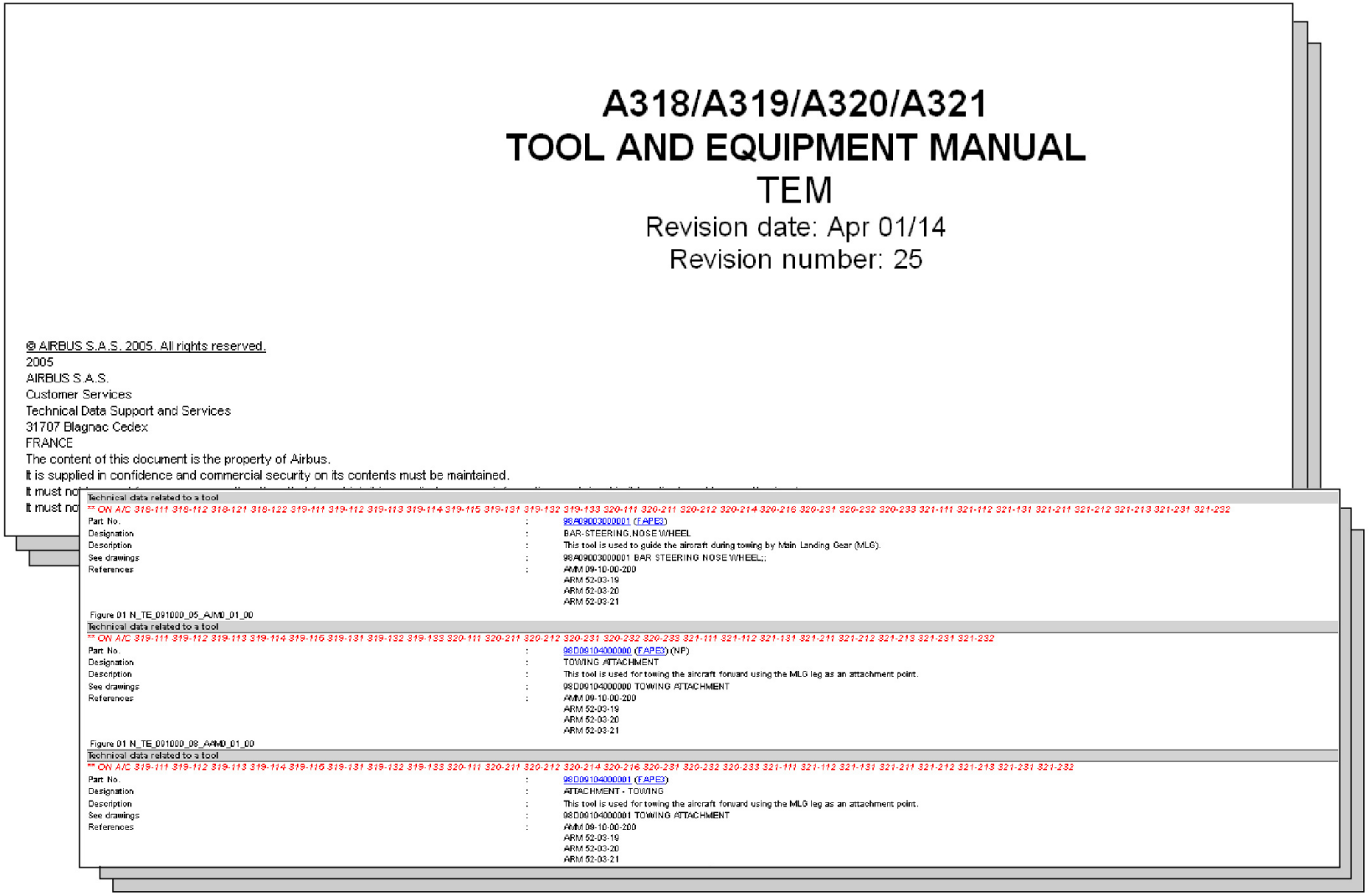

A318/A319/A320/A321
TOOL AND EQUIPMENT MANUAL
TEM
Revision date: Apr 01/14
Revision number: 25

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Technical data related to a tool

** ON A/C 318-111 318-112 318-121 318-122 319-111 319-112 319-113 319-114 319-115 319-131 319-132 319-133 320-111 320-211 320-212 320-214 320-216 320-231 320-232 320-233 321-111 321-112 321-131 321-211 321-212 321-213 321-231 321-232

Part No.	:	98A09003000001 (FAPE3)
Designation	:	BAR-STEERING,NOSEWHEEL
Description	:	This tool is used to guide the aircraft during towing by Main Landing Gear (MLG).
See drawings	:	98A09003000001 BAR STEERING NOSEWHEEL;;
References	:	AMM 09-10-00-200 ARM 52-03-19 ARM 52-03-20 ARM 52-03-21

Figure 01 N_TE_091000_05_AMD_01_00

Technical data related to a tool

** ON A/C 319-111 319-112 319-113 319-114 319-115 319-131 319-132 319-133 320-111 320-211 320-212 320-231 320-232 320-233 321-111 321-112 321-131 321-211 321-212 321-213 321-231 321-232

Part No.	:	98D09104000000 (FAPE3) (NP)
Designation	:	TOWING ATTACHMENT
Description	:	This tool is used for towing the aircraft forward using the MLG leg as an attachment point.
See drawings	:	98D09104000000 TOWING ATTACHMENT
References	:	AMM 09-10-00-200 ARM 52-03-19 ARM 52-03-20 ARM 52-03-21

Figure 01 N_TE_091000_08_AMD_01_00

Technical data related to a tool

** ON A/C 319-111 319-112 319-113 319-114 319-115 319-131 319-132 319-133 320-111 320-211 320-212 320-214 320-216 320-231 320-232 320-233 321-111 321-112 321-131 321-211 321-212 321-213 321-231 321-232

Part No.	:	98D09104000001 (FAPE3)
Designation	:	ATTACHMENT - TOWING
Description	:	This tool is used for towing the aircraft forward using the MLG leg as an attachment point.
See drawings	:	98D09104000001 TOWING ATTACHMENT
References	:	AMM 09-10-00-200 ARM 52-03-19 ARM 52-03-20 ARM 52-03-21

GROUND SUPPORT EQUIPMENT AND TOOLS - SPECIFIC TOOLS

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SA FAMILY PRESENTATION

GROUND SUPPORT EQUIPMENT AND TOOLS (continued)

STANDARD GSE

Airbus considers as standard GSE any GSE which is not designed for a specific aircraft type, but it can/could be used on a number of different aircraft types.
Standard GSE includes, but is not limited: tow bars, axle/wheel change jacks, tripod maintenance jacks, access platforms, hydraulic ground carts, electrical power units, etc...

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MAIN LANDING GEAR FLAT TYRES AXLE JACK

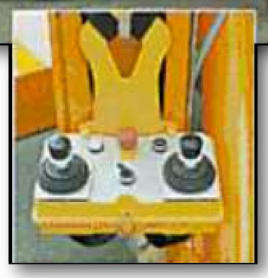
HYDRAULIC AXLE JACK

TRIPOD JACKS

TROLLEY JACK UP TO 77 TONNES

SET OF FLYAWAY AXLE JACKS

TOW BAR AXLE



GROUND SUPPORT EQUIPMENT AND TOOLS - STANDARD GSE

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SA FAMILY PRESENTATION

JACKING

Three jacking points, when equipped with jacking pads, are used to lift the aircraft. The forward point "A" is located forward of the nose landing gear. The points "B" and "C" are located outboard of the engine pylon.
A safety jack positioned at the rear of the aircraft prevents the aircraft from tipping up.
The open air jacking operation is limited if the wind velocity exceeds permissible values which depend on aircraft gross weight and center of gravity position.
In any condition, the aircraft must be pointed upwind.
The three jacks have to be operated together.
The aircraft has to be lifted so that the landing gear can be operated in the "landing gear shock absorbers deflated, flat tyres" configuration.
As soon as the jacking operation is finished, position the safety jack at the tail.
Jacking pads have to be used under the jacking points to spread the loads.
To make sure that excessive side loads are not placed on the jacks and on the aircraft structure, a quick leveling check must be carried out during the jacking operation.
The leveling check can be made through different ways using:
- the Attitude Monitor (if installed),
- a Spirit Level in the FWD Cargo Compartment or in the Passenger compartment.
- the ADIRUs pitch and roll angles, through the Alpha call up's codes (AIDS).

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JACKING

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SA FAMILY PRESENTATION

TOWING

Towing: you can tow the aircraft by the nose landing gear or the main landing gear. You can also tow the aircraft with deflated tires.
Towing operation, whether push back or pull, requires a good team co-operation.
Some airlines have two different types of towing procedures in use:
- maintenance towing,
- transportation servicing towing.

Maintenance towing procedures are laid down in the applicable AMM - Chapter 09.
Transportation servicing towing procedures are published in the applicable ramp operation manuals.
The major differences between the two are that transportation services only get involved with moving aircraft on ramps for positioning or dispatch pushback.
When they are handling the towing operation, they require either a pilot or qualified maintenance man on the aircraft brakes.
On the other hand, maintenance personnel is involved in moving aircraft in abnormal situation such as aircraft stuck in mud, towing with flat tires, engines removal, etc., as well as routine towing to gates.
Because of the hazards that may be involved in the towing operation, major precautions taken have been gathered together and are listed under paragraph "General Towing Precaution".
Caution and warnings are repeated as necessary in the particular step of the towing operation to which they apply.

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TOWING

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SA FAMILY PRESENTATION

SAFETY ITEMS

When you work on aircraft, make sure that you obey all the AMM safety procedures. This will prevent injury to persons and/or damage to the aircraft
The following terms are used in the AMM and are defined as follows:

WARNING: call attention to the use of material, processes, methods, procedures or limits, which must be followed precisely to avoid injury or death to persons.

CAUTION: call attention to methods and procedures, which must be followed to avoid damage to equipment.

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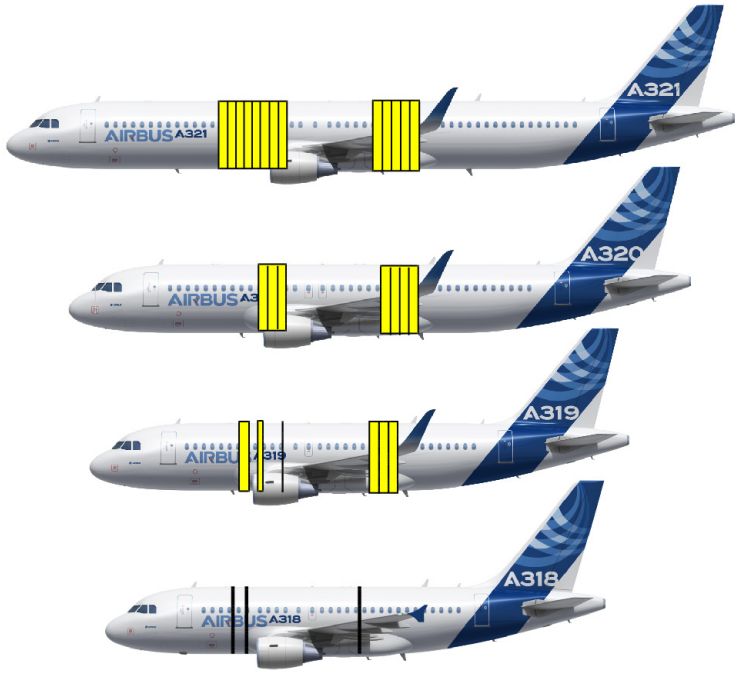

WARNING

USE OF MATERIAL, PROCESSES, METHODS, PROCEDURES OR LIMITS THAT MUST BE FOLLOWED TO AVOID INJURY OR DEATH TO PERSONS.

CAUTION

METHODS AND PROCEDURES THAT MUST BE FOLLOWED TO AVOID DAMAGE TO EQUIPMENT.

SAFETY ITEMS

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SA FAMILY PRESENTATION

PLACARDS AND MARKINGS

The ATA 11 gives the location and illustrations of the placards, stencils and markings on the A/C (internal or external side).
The placards and markings on the A/C give the data and instructions related to safety (Caution or Warning) and maintenance (Operations instructions or Systems locations).
Some of these placards and markings are necessary to obey the regulation used for the Airbus aircraft type certification (JAR 25). There are identified by a flag note as follows: NOTE (1) REQUIRED BY REGULATION.
This example is extracted from the AMM chapter 11-21-52: Passenger Doors

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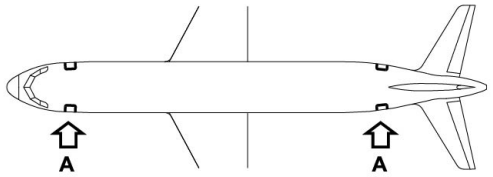

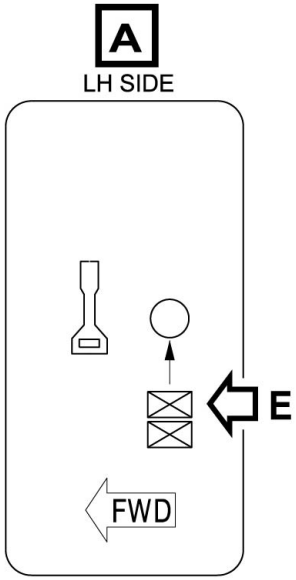

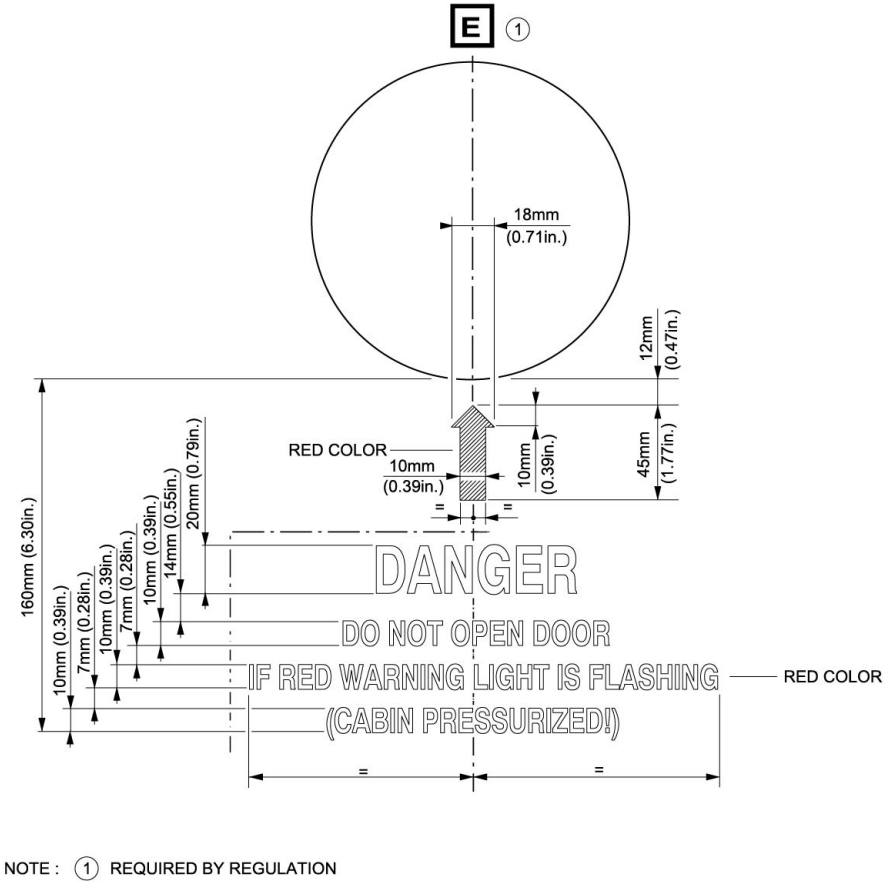

NOTE : (1) REQUIRED BY REGULATION

EXAMPLE FROM AMM 11-21-52

PLACARDS AND MARKINGS

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ACT CLASSROOM PRESENTATION

OBJECTIVES AND RULES OF THE PRESENTATION

LAUNCH VIRTUAL COCKPIT

LAUNCH VIRTUAL AIRCRAFT

VIRTUAL COCKPIT

- **ZOOM IN AND OUT**
- **NAVIGATION AND ZOOM**
- **FEW ICONS ON TOOL BAR**

VIRTUAL A/C

- **NAVIGATION**

NOTE: Note: Shift trainee's role (change mouse control)

- **LOCATION AND ACTION**
- **FEW ICONS ON TOOL BAR AT THE RIGHT BOTTOM**

VIRTUAL COCKPIT, ICON FOR ELEC PWR

VIRTUAL A/C, MENU FOR GROUND SERVICES

VIRTUAL COCKPIT

- **ICON FOR PANEL SELECTION**
- **DIRECT ACTION ON PANEL**

NOTE: Note: Shift trainee's role (change mouse control)

VIRTUAL A/C, ITEM LOCATION AND FIRST "CHANGE OF WORLD"

VIRTUAL COCKPIT, DIRECT ACTION ON PANEL

VIRTUAL A/C, SAFETY ITEMS MENU, LINKS WITH SIMULATION AND COCKPIT RESULTS

VIRTUAL COCKPIT, DIRECT ACTION ON PANEL AND SAFETY/OPERATIONAL PROCEDURES

VIRTUAL A/C, DIRECT ACTION AND SAFETY/OPERATIONAL PROCEDURES

NOTE: Note: Shift trainee's role (change mouse control)

VIRTUAL COCKPIT, DIRECT ACTION ON PANEL

VIRTUAL A/C, ACTION AND LINKS WITH THE SIMULATION, EFFECTS IN THE COCKPIT

VIRTUAL COCKPIT, END OF PROCEDURE

VIRTUAL A/C

- **CHANGE OF WORLD AND EXPLANATION OF FUTURE TASKS/ACTIONS TO BE DONE**

NOTE: Note: Shift trainee's role (change mouse control)

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TOOL BAR

VIRTUAL COCKPIT, TOOL BAR

IF REMAINING TIME

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OBJECTIVES AND RULES OF THE PRESENTATION ... IF REMAINING TIME

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PRACTICAL ASSESSMENT

PRINCIPLE

The required competence has to be assessed and the assessment is individual.
Operational competencies and their observable criteria have been defined for training and assessment.
The assessment is used to confirm the trainee has the required competence.
The assessment is used continually during the training period (P1 & P2).
It consists of identifying the trainee strong points and to improve the trainee weak points by additional coaching.

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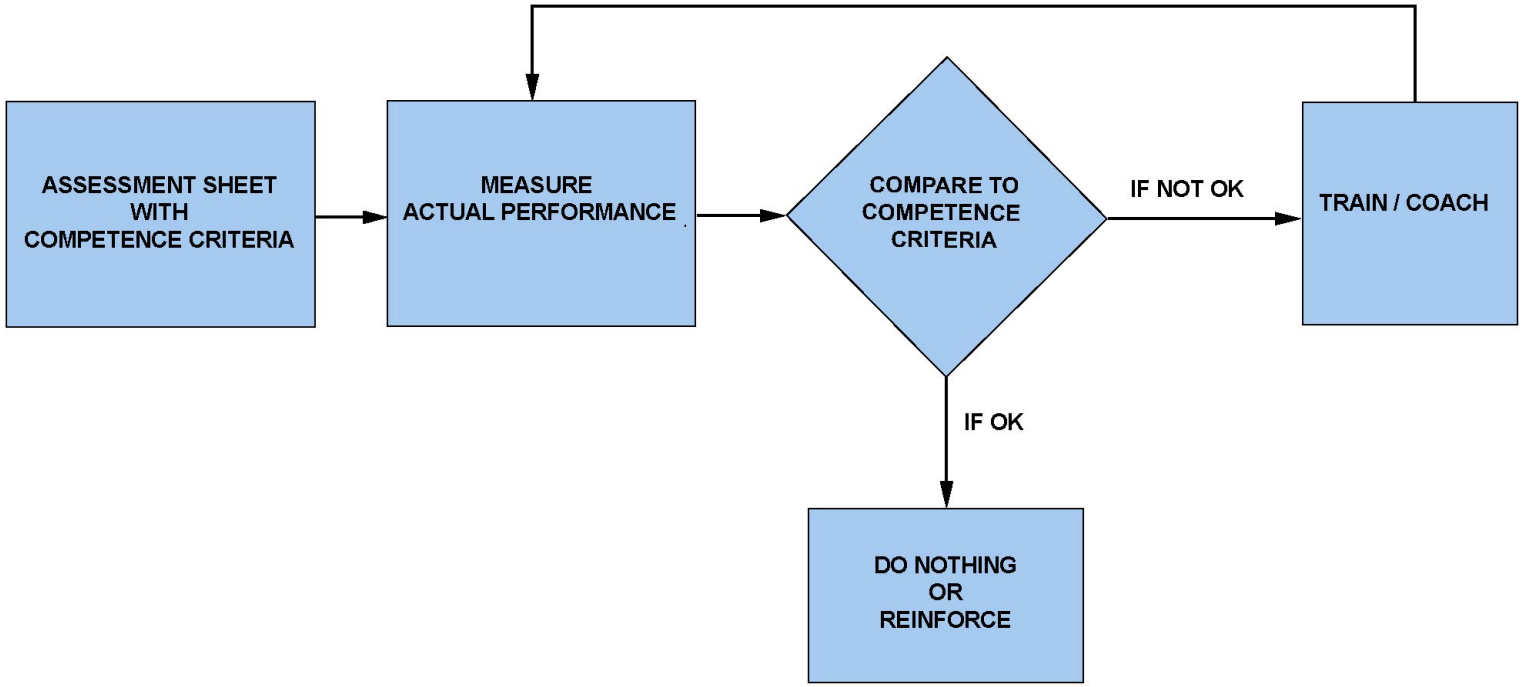

PRINCIPLE

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PRACTICAL ASSESSMENT

COMPETENCIES

During the P1 ACT exercise, the trainee performance is assessed on the following competencies: Use reports and indications, Find and Use Aircraft documentation, and Repots in logbook.
During the P2, the trainee performance is assessed on the following competencies: Operate in compliance with environment, Correctly perform actions, System interaction and Performs aircraft final / close-up.

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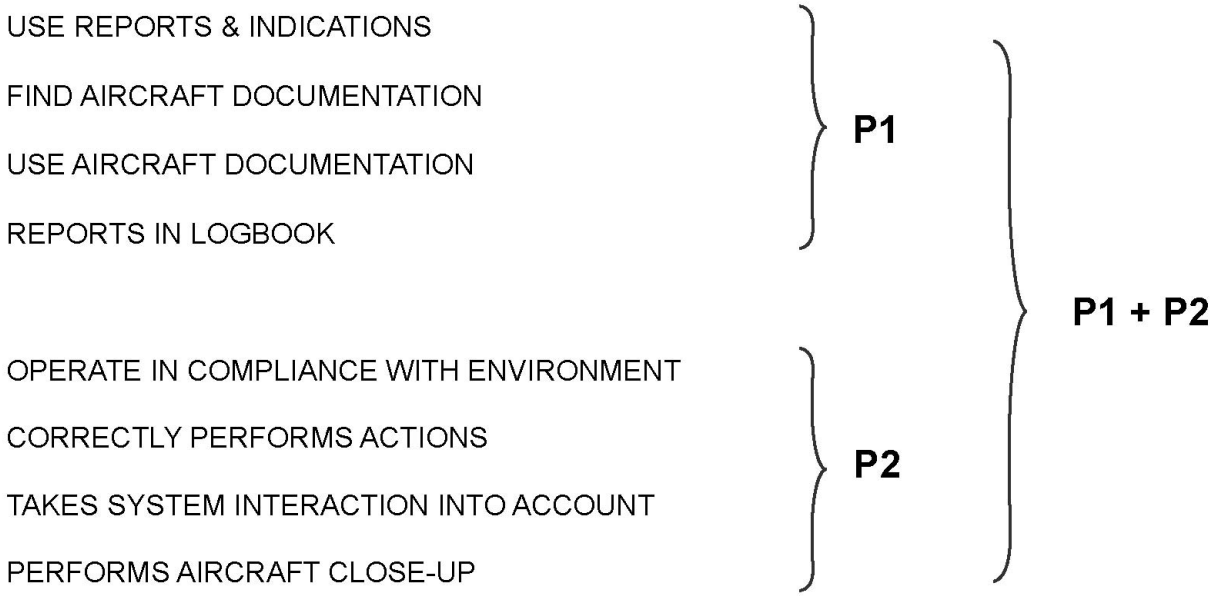

8 COMPETENCIES WITH OBSERVABLE CRITERIA

COMPETENCIES

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PRACTICAL ASSESSMENT

PERFORMANCE ASSESSMENT P1 ON ACT TRAINER

The Assessment Sheet supports up to 3 different periods of performance assessment.
The Performance result can be Unsatisfactory when the observed performance was not adequate/ had safety implications or Satisfactory when the observed performance was adequate.
If "Satisfactory" level is reached at first assessment, it does not need to be re-assessed. After an "Unsatisfactory" result, a coaching action is conducted. The objective of the coaching action is to improve the performance of the trainee and prepare him or her for a re-assessment.
If after 3 assessments the level is still "Unsatisfactory" then the performance result of the competency is considered "Unsatisfactory".
If after the third assessment a Satisfactory Level is still not reached, a remedial training and assessment will be defined on a case-by-case basis.
Only the failed competency has to be re-assessed.
After the remedial, if the trainee fails again the trainee can follow the P2 but cannot get the Practical Training Certificate.

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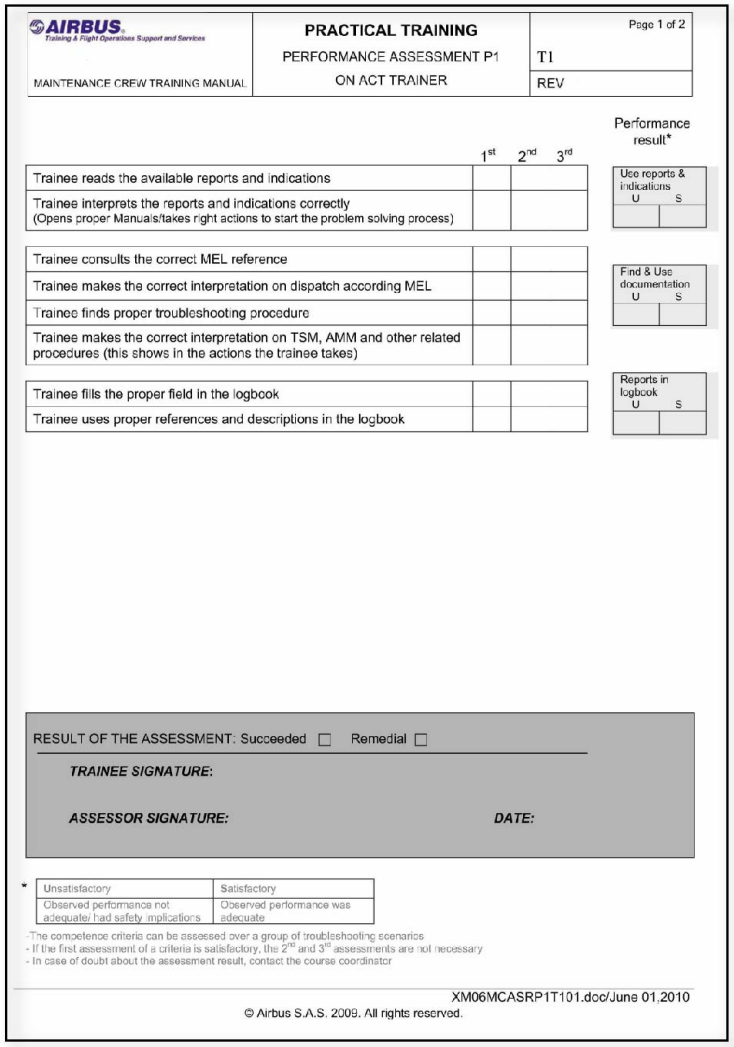

AIRBUS Training & Flight Operations Support and Services
MAINTENANCE CREW TRAINING MANUAL

PRACTICAL TRAINING
PERFORMANCE ASSESSMENT P1
ON ACT TRAINER

Page 1 of 2
T1
REV

	1st	2nd	3rd	Performance result*
Trainee reads the available reports and indications				Use reports & indications U S
Trainee interprets the reports and indications correctly (Opens proper Manuals/takes right actions to start the problem solving process)				
Trainee consults the correct MEL reference				Find & Use documentation U S
Trainee makes the correct interpretation on dispatch according MEL				
Trainee finds proper troubleshooting procedure				
Trainee makes the correct interpretation on TSM, AMM and other related procedures (this shows in the actions the trainee takes)				
Trainee fills the proper field in the logbook				Reports in logbook U S
Trainee uses proper references and descriptions in the logbook				

RESULT OF THE ASSESSMENT: Succeeded ☐ Remedial ☐

TRAINEE SIGNATURE:

ASSESSOR SIGNATURE: ***DATE:***

* Unsatisfactory: Observed performance not adequate/ had safety implications
Satisfactory: Observed performance was adequate

- The competence criteria can be assessed over a group of troubleshooting scenarios
- If the first assessment of a criteria is satisfactory, the 2nd and 3rd assessments are not necessary
- In case of doubt about the assessment result, contact the course coordinator

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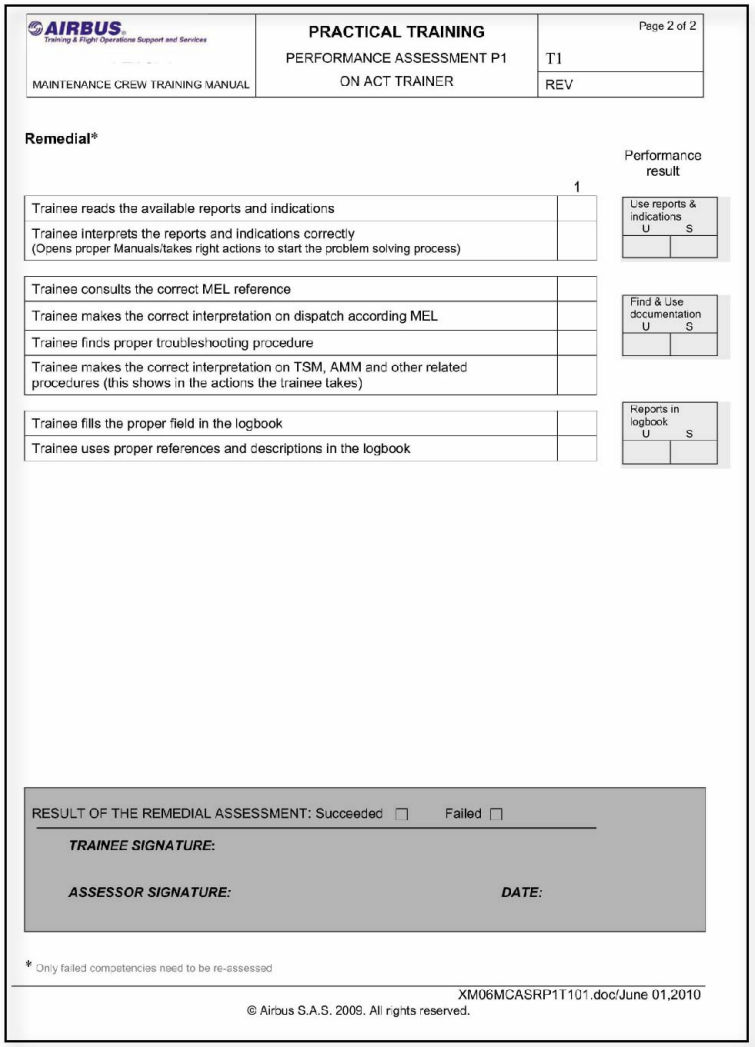

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MAINTENANCE CREW TRAINING MANUAL

PRACTICAL TRAINING
PERFORMANCE ASSESSMENT P1
ON ACT TRAINER

Page 2 of 2
T1
REV

Remedial*

	1	Performance result
Trainee reads the available reports and indications		Use reports & indications U S
Trainee interprets the reports and indications correctly (Opens proper Manuals/takes right actions to start the problem solving process)		
Trainee consults the correct MEL reference		Find & Use documentation U S
Trainee makes the correct interpretation on dispatch according MEL		
Trainee finds proper troubleshooting procedure		
Trainee makes the correct interpretation on TSM, AMM and other related procedures (this shows in the actions the trainee takes)		
Trainee fills the proper field in the logbook		Reports in logbook U S
Trainee uses proper references and descriptions in the logbook		

RESULT OF THE REMEDIAL ASSESSMENT: Succeeded ☐ Failed ☐

TRAINEE SIGNATURE:

ASSESSOR SIGNATURE: ***DATE:***

* Only failed competencies need to be re-assessed

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PERFORMANCE ASSESSMENT P1 ON ACT TRAINER

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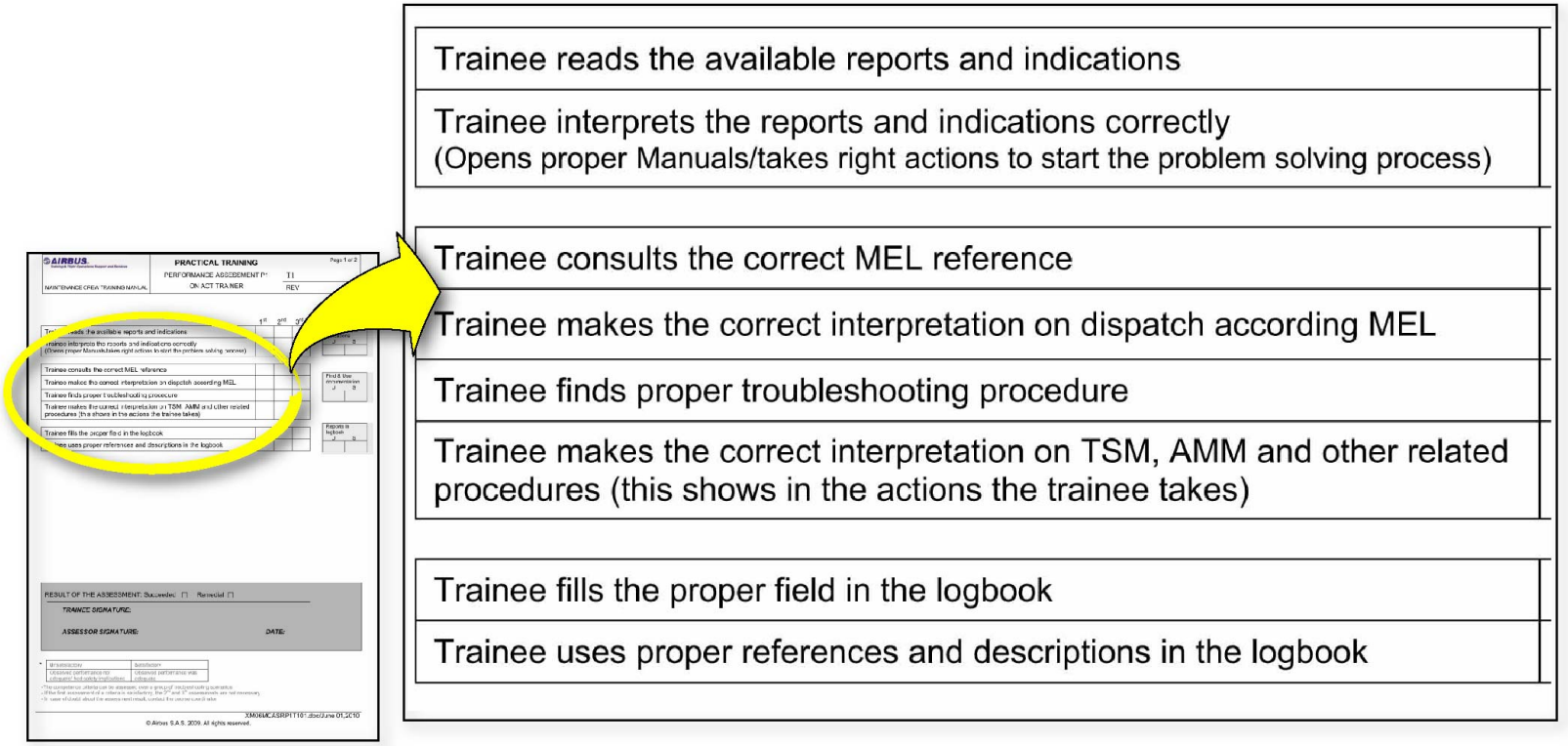
Trainee reads the available reports and indications
Trainee interprets the reports and indications correctly
(Opens proper Manuals/takes right actions to start the problem solving process)
Trainee consults the correct MEL reference
Trainee makes the correct interpretation on dispatch according MEL
Trainee finds proper troubleshooting procedure
Trainee makes the correct interpretation on TSM, AMM and other related procedures (this shows in the actions the trainee takes)
Trainee fills the proper field in the logbook
Trainee uses proper references and descriptions in the logbook

PERFORMANCE ASSESSMENT SHEET : CRITERIA

PERFORMANCE ASSESSMENT P1 ON ACT TRAINER

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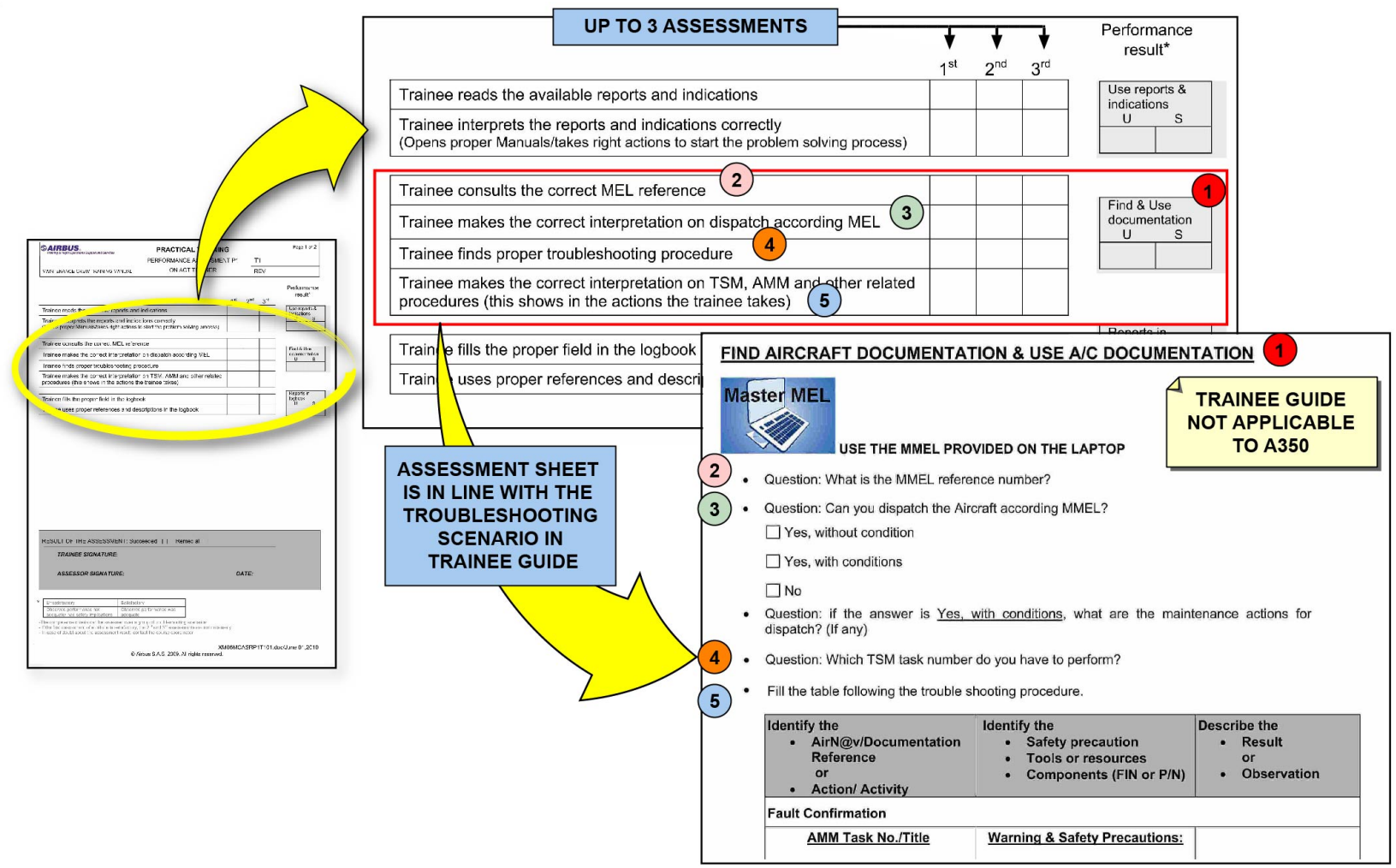
UP TO 3 ASSESSMENTS
1st
2nd
3rd
Performance result*
Trainee reads the available reports and indications
Trainee interprets the reports and indications correctly
(Opens proper Manuals/takes right actions to start the problem solving process)
Use reports & indications
U
S
Trainee consults the correct MEL reference
Trainee makes the correct interpretation on dispatch according MEL
Trainee finds proper troubleshooting procedure
Trainee makes the correct interpretation on TSM, AMM and other related procedures (this shows in the actions the trainee takes)
Find & Use documentation
U
S
Trainee fills the proper field in the logbook
Trainee uses proper references and descri
ASSESSMENT SHEET IS IN LINE WITH THE TROUBLESHOOTING SCENARIO IN TRAINEE GUIDE
FIND AIRCRAFT DOCUMENTATION & USE A/C DOCUMENTATION
Master MEL
USE THE MMEL PROVIDED ON THE LAPTOP
TRAINEE GUIDE NOT APPLICABLE TO A350
Question: What is the MMEL reference number?
Question: Can you dispatch the Aircraft according MMEL?
Yes, without condition
Yes, with conditions
No
Question: if the answer is Yes, with conditions, what are the maintenance actions for dispatch? (If any)
Question: Which TSM task number do you have to perform?
Fill the table following the trouble shooting procedure.
Identify the
AirN@v/Documentation Reference
or
Action/ Activity
Identify the
Safety precaution
Tools or resources
Components (FIN or P/N)
Describe the
Result
or
Observation
Fault Confirmation
AMM Task No./Title
Warning & Safety Precautions:

PERFORMANCE ASSESSMENT SHEET

PERFORMANCE ASSESSMENT P1 ON ACT TRAINER

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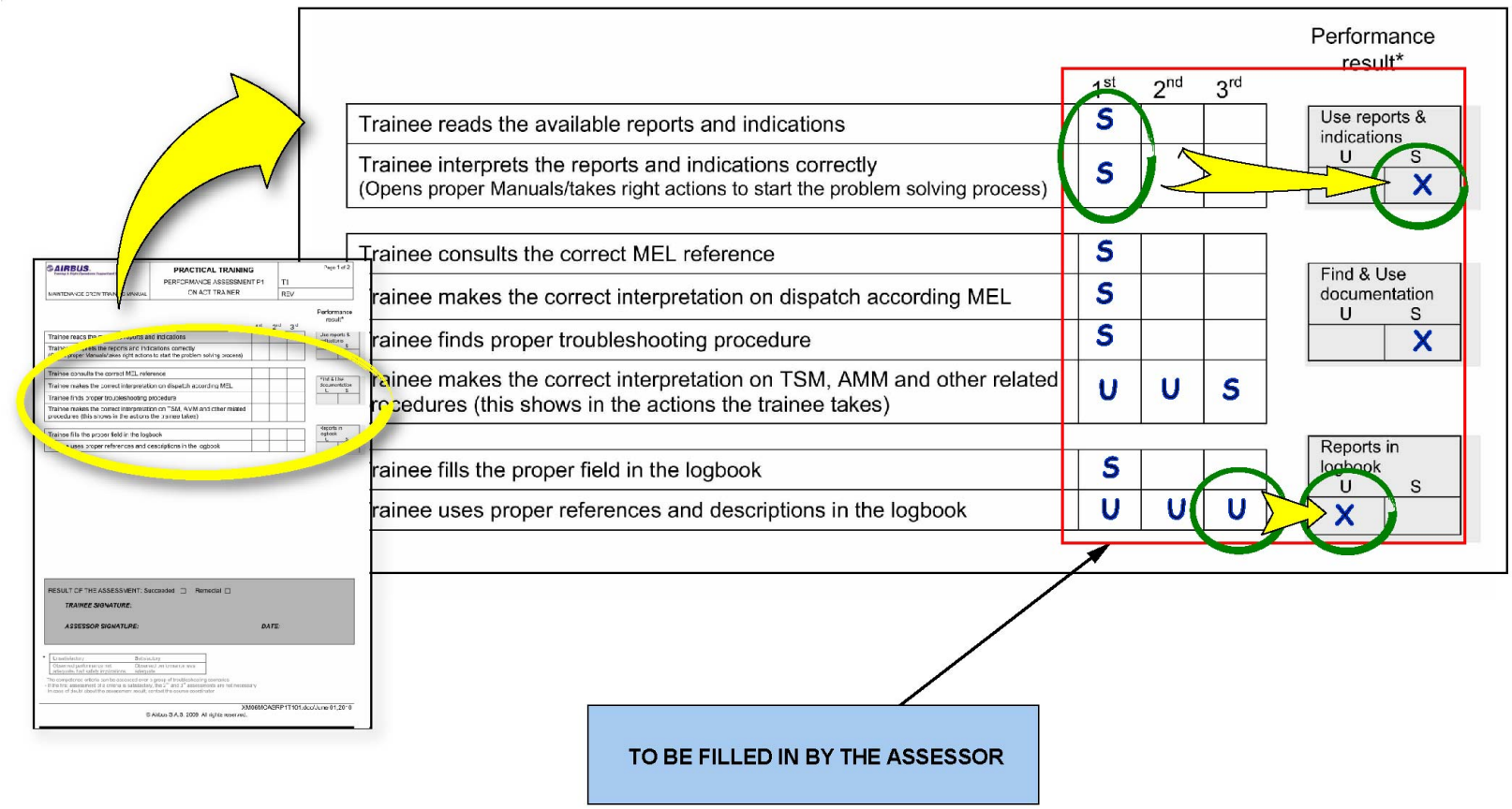
Performance result*
1st
2nd
3rd
Trainee reads the available reports and indications
Trainee interprets the reports and indications correctly
(Opens proper Manuals/takes right actions to start the problem solving process)
Use reports & indications
U
S
Trainee consults the correct MEL reference
rainee makes the correct interpretation on dispatch according MEL
rainee finds proper troubleshooting procedure
Find & Use documentation
rainee makes the correct interpretation on TSM, AMM and other related rocedures (this shows in the actions the trainee takes)
rainee fills the proper field in the logbook
rainee uses proper references and descriptions in the logbook
Reports in logbook
TO BE FILLED IN BY THE ASSESSOR

PERFORMANCE ASSESSMENT SHEET

PERFORMANCE ASSESSMENT P1 ON ACT TRAINER

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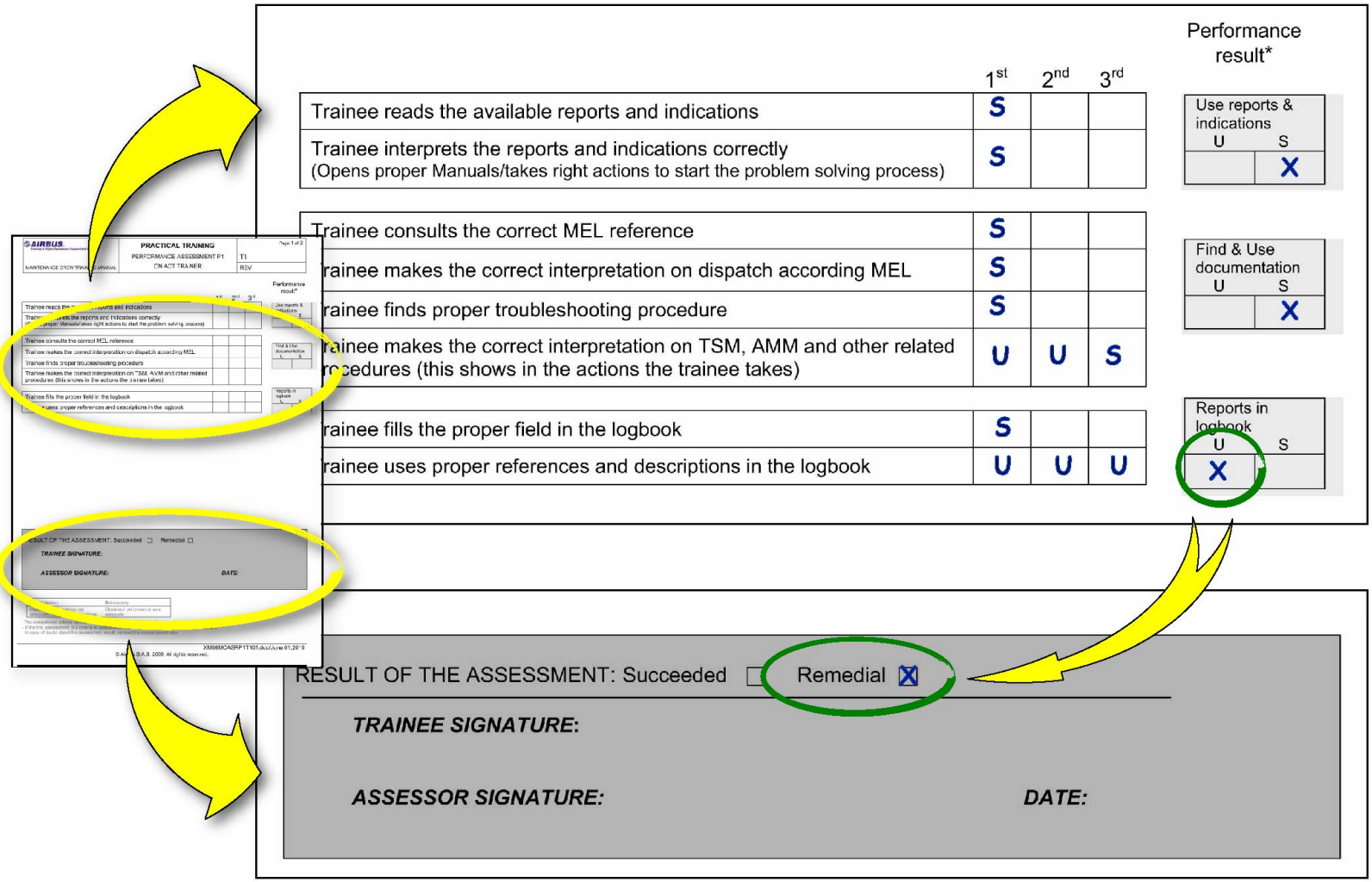
Performance result*
1st 2nd 3rd
Trainee reads the available reports and indications S
Trainee interprets the reports and indications correctly (Opens proper Manuals/takes right actions to start the problem solving process) S
Use reports & indications U S X
Trainee consults the correct MEL reference S
Trainee makes the correct interpretation on dispatch according MEL S
Trainee finds proper troubleshooting procedure S
Trainee makes the correct interpretation on TSM, AMM and other related procedures (this shows in the actions the trainee takes) U U S
Find & Use documentation U S X
Trainee fills the proper field in the logbook S
Trainee uses proper references and descriptions in the logbook U U U
Reports in logbook U S X
RESULT OF THE ASSESSMENT: Succeeded ☐ Remedial ☒
TRAINEE SIGNATURE:
ASSESSOR SIGNATURE: DATE:

PERFORMANCE ASSESSMENT SHEET

PERFORMANCE ASSESSMENT P1 ON ACT TRAINER

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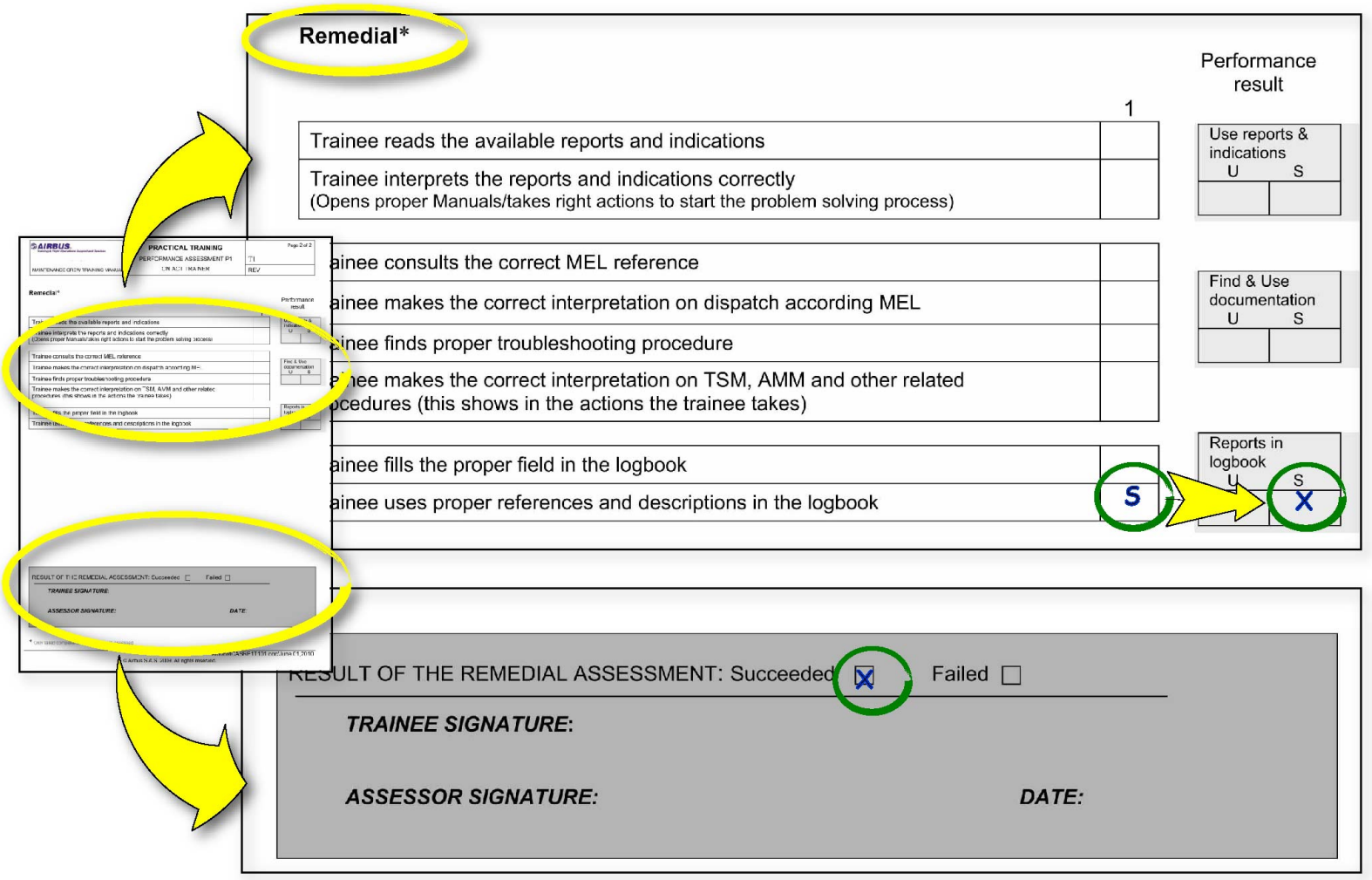
Remedial*
Performance result
1
Trainee reads the available reports and indications
Trainee interprets the reports and indications correctly
(Opens proper Manuals/takes right actions to start the problem solving process)
Use reports & indications
U S
ainee consults the correct MEL reference
ainee makes the correct interpretation on dispatch according MEL
inee finds proper troubleshooting procedure
ee makes the correct interpretation on TSM, AMM and other related
ocedures (this shows in the actions the trainee takes)
Find & Use documentation
U S
ainee fills the proper field in the logbook
ainee uses proper references and descriptions in the logbook
Reports in logbook
U S
S
X
RESULT OF THE REMEDIAL ASSESSMENT: Succeeded
Failed
TRAINEE SIGNATURE:
ASSESSOR SIGNATURE:
DATE:

PERFORMANCE ASSESSMENT SHEET : REMEDIAL

PERFORMANCE ASSESSMENT P1 ON ACT TRAINER

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PRACTICAL ASSESSMENT

PERFORMANCE ASSESSMENT P2 ON AIRCRAFT

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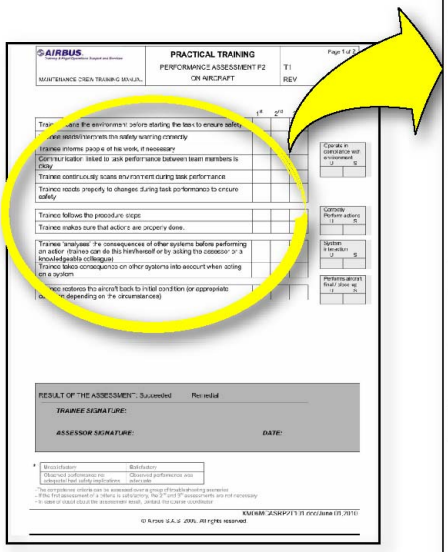

Trainee scans the environment before starting the task to ensure safety
Trainee reads/interprets safety warnings correctly
Trainee informs people of his work, if necessary
Communication linked to task performance between team members is okay
Trainee continuously scans environment during task performance
Trainee reacts properly to changes during task performance to ensure safety

Trainee follows the procedure steps
Trainee makes sure that actions are properly done.

Trainee 'analyses' the consequences on of other systems before performing an action (trainee can do this him/herself or by asking the assessor or a knowledgeable colleague)
Trainee takes consequence on other systems into account when acting on a system

Trainee brings the aircraft back to initial condition (or appropriate condition seeing the circumstances)

PERFORMANCE ASSESSMENT P2 ON AIRCRAFT

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PRACTICAL ASSESSMENT

PERFORMANCE ASSESSMENT COACHING SHEETS

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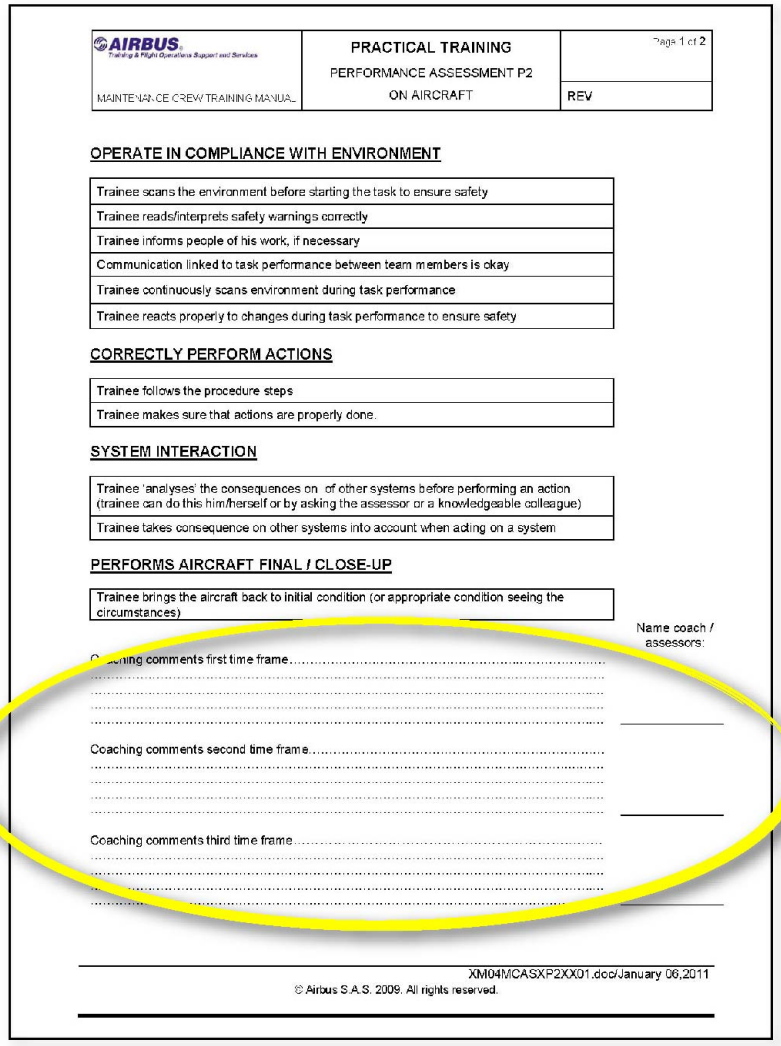

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MAINTENANCE CREW TRAINING MANUAL

PRACTICAL TRAINING
PERFORMANCE ASSESSMENT P2
ON AIRCRAFT

Page 1 of 2

REV

OPERATE IN COMPLIANCE WITH ENVIRONMENT

Trainee scans the environment before starting the task to ensure safety
Trainee reads/interprets safety warnings correctly
Trainee informs people of his work, if necessary
Communication linked to task performance between team members is okay
Trainee continuously scans environment during task performance
Trainee reacts properly to changes during task performance to ensure safety

CORRECTLY PERFORM ACTIONS

Trainee follows the procedure steps
Trainee makes sure that actions are properly done.

SYSTEM INTERACTION

Trainee 'analyses' the consequences on of other systems before performing an action (trainee can do this him/herself or by asking the assessor or a knowledgeable colleague)
Trainee takes consequence on other systems into account when acting on a system

PERFORMS AIRCRAFT FINAL / CLOSE-UP

Trainee brings the aircraft back to initial condition (or appropriate condition seeing the circumstances)

Name coach / assessors:

Coaching comments first time frame.....

Coaching comments second time frame.....

Coaching comments third time frame.....

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PERFORMANCE ASSESSMENT COACHING SHEETS

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PRACTICAL ASSESSMENT

SUMMARY

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1 - The assessment is based on competencies and their criteria.
You can find them on the assessment sheet.

2- Performance will be assessed with the assessment sheet.
Assessment is not linked to one specific task, all P1/P2 tasks are suitable.

3- The outcome will be discussed with the trainee :
- strong points will be identified and validated
- weak points will be coached and reassessed

Agreed coaching actions are summarized on the coaching sheet. (stored in the trainee guide)

4- The final result of each competence block will be signed on the assessment sheet.

SUMMARY

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